FLORIDA WILDLIFE®

Volume 41, Number 6 November-December 1987

HUNTER ORANGE

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FLORIDA WILDLIFE®

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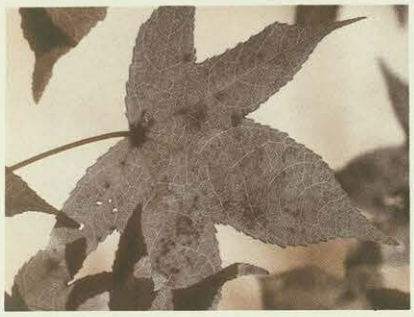

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OUR COVERS

The red fox, a more northerly species that has adapted to much of Florida, is seldom seen in the wild for more than a brief moment. The front cover photograph of this one was taken by Tom Ulrich. Our back cover photo, by William A. Greer, shows a Canada goose. Thousands of Canada geese once migrated to Florida, but now migrants are rare over most of the state.

FLORIDA WILDLIFE

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Publisher

TREE STAND HUNTING

By Bob "Greenie" Grewell

Hunting from a tree stand is a choice method for many Florida hunters because it can be a very productive means of spotting deer, at least on an overall basis. And hunters can use this method in just about every part of Florida where deer hunting is permitted. Elevation enables you to view the surrounding deer hunting territory more clearly. You'll also have a better chance of spotting a white-tail well before it gets within range.

Deer often stay close to or around some type of wooded habitat because trees provide protective cover, visual deception and food sources. Once you are quietly situated in a comfortable tree stand, there is less chance of being noticed by a deer because your body and equipment odors are more likely to be up and away from a deer's sensitive nose. Deer will, however, look up in a tree if you make a false move or alarm them with noise.

Tree stand sites should be selected on the basis of their safe use, comfort and location. Areas close to intersecting trails or at the hub of two or three heavily used game trails are often good. Woods close to prime food sources are frequently excellent locations to set up tree stands. If you find a good tree with these characteristics and use it early in the morning or a couple of hours before dark, you will probably see deer.

In early morning, white-tails tend to leave their feeding areas and head for bushy bedding spots. In late afternoon, they'll usually be rousing from their beds and returning to favorable feeding locations. Position yourself accordingly.

If you can locate a hillside thicket which shows signs of heavy bedding use, select a tree close to, but not right on top of the main trail. If an obvious trail appears to snake through their sleeping quarters, you can bet your chances will be top-notch. It's best to try and stay at least 150 to 200 yards away from and on the downwind side of their beds. Be certain your tree stand is located 10 to 25 yards off the main trail. Ground-level foliage density will influence this. If you spook them by trying to get too close, deer will move to less pressured sleeping areas.

Many hunters say that the best way to pursue a wily buck is to hunt from a tree stand.

Keep an eye behind you whenever you're actually hunting from a tree that is being used under these habitat conditions. Big bucks usually do not use the main trails doe and smaller bucks most frequently travel. That's one reason big bucks get to be big bucks. They often travel the same area and direction, but stay off the more defined trails, especially if the trails are exposed. Many bucks become masters at hiding in foliage and underbrush. Hunters who look for a wet nose, the flick of an ear or off-colored moving objects will see more deer.

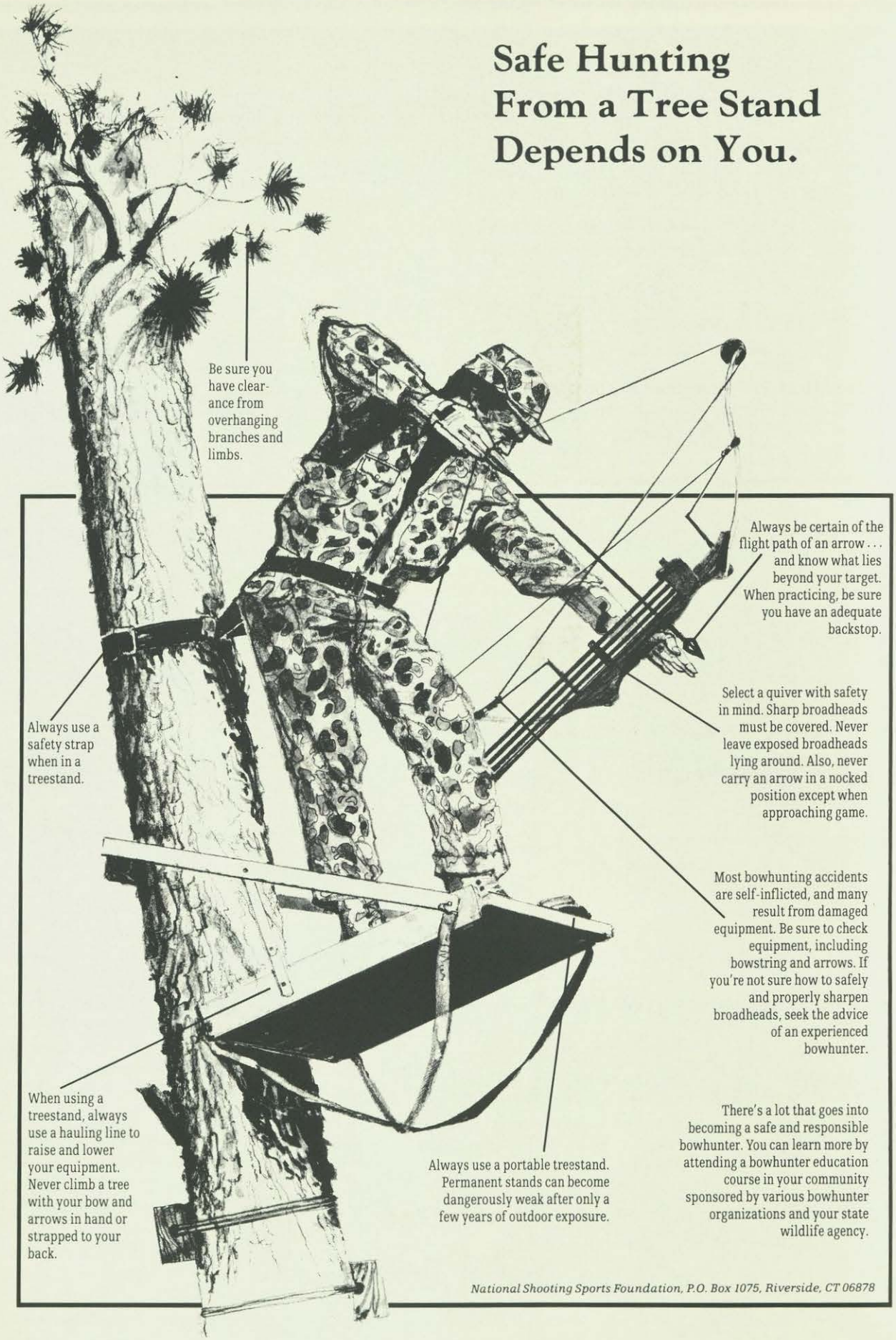
Position your stand away from the main path so it puts you on the downwind side, or at least so the prevailing wind currents quarter toward you. Human scent is alarming to deer. If you pay strict attention to wind direction you should see more deer. This is such an important element to success that failure to use wind direction to your advantage can ruin your chances of scoring. Be absolutely certain you're on the downwind side of the trail—even if you are up in the air—so that an unexpected wisp of wind doesn't alert a deer using the trail.

Deer, when engaged in normal daily activities, generally don't look up—but if you make a careless move or noise, they will. Sometimes a buck that's previously been shot at from a tree stand, or perhaps spooked in some other way, will look up more than usual. So even though a tree puts you above a deer's normal sight and hearing capabilities, you still need to observe complete hunting prowess.

To take best advantage of tree stand hunting, learn to judge various shooting ranges and angles from a height. Most hunters settle on heights of 12 to 18 feet, depending on the tree and terrain. When shooting at ground-level quarry from above, it is easy to misjudge and shoot over your target if you have not done much elevated-angle shooting. Don't just practice at ground level, shooting your bullet or arrow on a flat-pattern range; practice for the conditions you will actually be hunting in. Also, once you're in your stand, be certain you can move into a safe shooting position without banging your gun, bow or other equipment against the tree.

PHOTOGRAPH BY JOHN WATERS JR.

Safe Hunting From a Tree Stand Depends on You.



Be sure you have clearance from overhanging branches and limbs.

Always be certain of the flight path of an arrow . . . and know what lies beyond your target. When practicing, be sure you have an adequate backstop.

Always use a safety strap when in a treestand.

Select a quiver with safety in mind. Sharp broadheads must be covered. Never leave exposed broadheads lying around. Also, never carry an arrow in a nocked position except when approaching game.

Most bowhunting accidents are self-inflicted, and many result from damaged equipment. Be sure to check equipment, including bowstring and arrows. If you're not sure how to safely and properly sharpen broadheads, seek the advice of an experienced bowhunter.

When using a treestand, always use a hauling line to raise and lower your equipment. Never climb a tree with your bow and arrows in hand or strapped to your back.

Always use a portable treestand. Permanent stands can become dangerously weak after only a few years of outdoor exposure.

There's a lot that goes into becoming a safe and responsible bowhunter. You can learn more by attending a bowhunter education course in your community sponsored by various bowhunter organizations and your state wildlife agency.

National Shooting Sports Foundation, P.O. Box 1075, Riverside, CT 06878

10 Commandments of Firearm Safety

1. **Treat every firearm with respect—always as if it was loaded.**
2. **Watch the muzzle. Be able to control its direction even if you should stumble or fall.**
3. **Be sure the barrel and action are clear of all obstructions, and that you only use ammunition of the proper size and load for that firearm.**
4. **Be sure of your target before you pull the trigger or release an arrow. Know the identifying features of the game you hunt.**
5. **Unload firearms when they are not actually in use. Take actions down or leave them open. Firearms should be carried in closed cases to shooting areas.**
6. **Never point a firearm at anything you do not want to shoot. Avoid all "horseplay" with firearms.**
7. **Never climb a fence or jump a ditch with a loaded firearm. Never pull a gun toward you by its muzzle.**
8. **Never shoot a bullet at a flat, hard surface or at water. At target practice, be sure your backstop is adequate.**
9. **Store all firearms and ammunition separately, and secure from the reach of children and careless adults.**
10. **Avoid using alcoholic beverages and all other mood-altering substances (including prescription drugs) before and during the use of any firearm.**

Several basic types of tree stands can be used to give yourself that extra edge against Florida's wily white-tails:

Portable Tree Stands

Portable platform-type tree stands come in various designs and sizes, but the self-climbing types have become the most popular. This type is designed to be temporarily but firmly anchored to a tree's main trunk, where you can be up high and outside the radius of the trunk. This enables you to take your shot easier and quicker, and be less conspicuous.

Climbing-type stands are constructed in such a manner that you can carry them to your hunting site, even when you're fully dressed and carrying other gear for the hunt. They can be removed quickly and easily from the tree once you're through hunting for the day. Their mobility also decreases the chances of your stand being stolen, prevents others from using it and won't alert them to your prize hunting areas. Should weather patterns change or deer movement alter, you can simply move your stand to a new location.

Permanent Tree Stands

In Florida, on Type I wildlife management areas, it is prohibited to drive a metal object into any tree, and to hunt from a tree in which a metal object has been driven. However, with the landowner's permission, stationary platforms built with nails, bolts and the like can be used on private lands. Because of the danger of metal being hit at some future time by a chain saw or sawmill saw, however, it is much better to use chains, ropes or cables to lash a platform to a tree's limbs.

Properly constructed and maintained permanent tree stands can be very safe and useful because they're rigidly secured and are always at your selected hunting site. With a permanent tree stand, you don't need to carry anything extra to and from the site. Another advantage is that you can build it to suit your own needs or better fit with the irregular shape or contour of a desirable tree.

Natural Tree Stands

Using the natural forking limbs of a "leg sized" horizontal limb to sit on is another ploy utilized by some hunters to score their deer. Some trees just naturally make an excellent stand, and it's often easy to find a good one quickly.

Look for simple shape, ease of climbing, an unobstructed view and safe shooting lanes if you want a natural stand to serve your purpose adequately. A natural tree can be a real asset to your elevated deer hunting if it is safe and climbable. When it is easy to sit or stand in it comfortably for long periods of time, that's an even greater plus.

Tree-stand hunters demonstrate time after time that the best way to pursue a wily buck is to take to the trees. If you exercise caution and safety, do your homework by preseason scouting of likely hunting territories, familiarize yourself with your equipment and practice in the field, you'll stand a better chance of bringing home a deer this season. Once you get above the game and make a clean score, you'll be sold on tree stand hunting.

It's The Law

By Major Kyle Hill

May I legally "bait" deer or wild turkey for hunting?

Yes and no! *Florida Administrative Code* 39-12.002 provides that game feeders may be maintained for the purpose of propagating quail, turkey and other wild game under natural conditions. However, in order to legally take game over such feeders, two conditions must be met:

1. Feeding stations must have been in operation for at least six months prior to hunting over them; but,
2. No bear, turkey or migratory game birds (including ducks, coots, doves, rails, etc.) may be taken in proximity (close to or very near) to the feeders.

Standing or mowed agricultural crops, including rye grass, do not constitute "feeding stations," provided they are not "artificially sweetened" with grain, salt blocks or other baits.

You can hunt turkeys over a corn field, rye field or other agricultural crop—but not near a game feeder.

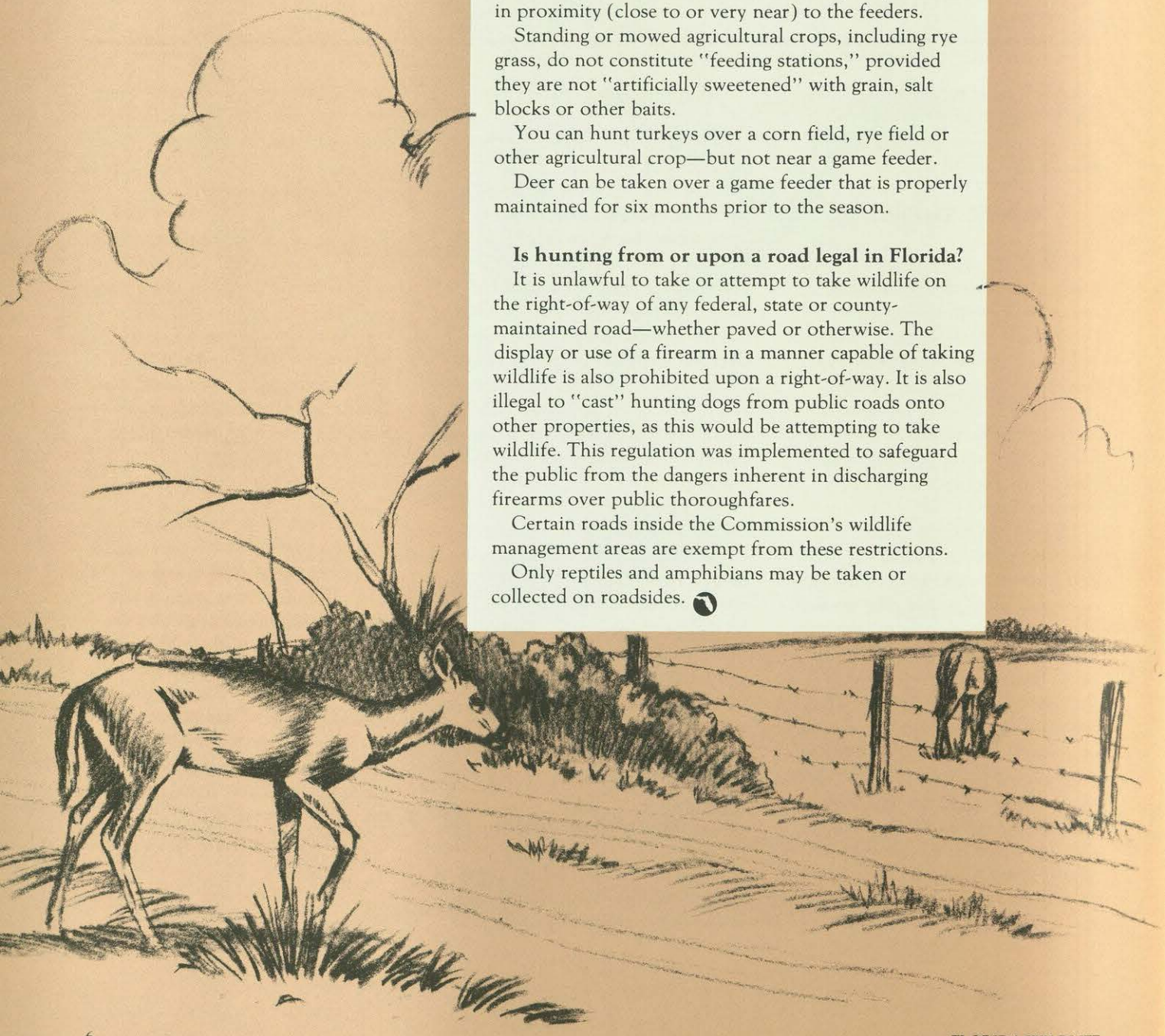
Deer can be taken over a game feeder that is properly maintained for six months prior to the season.

Is hunting from or upon a road legal in Florida?

It is unlawful to take or attempt to take wildlife on the right-of-way of any federal, state or county-maintained road—whether paved or otherwise. The display or use of a firearm in a manner capable of taking wildlife is also prohibited upon a right-of-way. It is also illegal to "cast" hunting dogs from public roads onto other properties, as this would be attempting to take wildlife. This regulation was implemented to safeguard the public from the dangers inherent in discharging firearms over public thoroughfares.

Certain roads inside the Commission's wildlife management areas are exempt from these restrictions.

Only reptiles and amphibians may be taken or collected on roadsides.



What Do Alligators Eat?

PHOTOGRAPH BY JAMES C. GREEN

By Michael F. Delany

Controlled alligator hunts, under direction of the Commission, were initiated in north-central Florida in 1981. The hunts were intended to determine the feasibility of managed harvests of this species and now they are being conducted on nine lakes located in various parts of the state.

Quotas for the late-summer hunts are determined in advance of the harvest, following counts made by field personnel using lights and boats to spot the alligators at night. Harvested alligator populations are later monitored by additional surveys and by nesting and tagging studies. The data collected from these studies help researchers determine the effects of hunting. Studies of harvested alligators also have provided an opportunity to obtain some basic biological information about alligators which is valuable for their proper management.

In conjunction with these hunts, stomachs were collected from 715 alligators and examined for their food content. Knowledge of the species' feeding habits helps to determine the role of the alligator as a top-level carnivore in Florida's wetlands.

Fish—mostly gars, gizzard shad and bowfin— were the most important food for the alligators studied. Compared to data collected by the Commission in blocknet fish surveys, the proportion of game fish and commercially valuable fish species in alligator stomachs was consistent with the relative occurrence of the prey species in the lakes studied. Alligators apparently eat whatever fish are available.

Apple snails were the most numerous food item, occurring equally in alligator size classes from four to 13 feet in length. Amphibians, birds and snakes constituted a smaller portion of their diet and turtles were most important in the diet of large male alligators. Females and subadults (less than six feet in length) consumed more mammals, insects and crayfish.

These dietary differences between sexes and size classes may be due to differences in occupied habitat and prey availability. Adult female alligators nesting near the shoreline or in marshes, and subadult alligators foraging close to shore are probably more likely to encounter (and eat) terrestrial and invertebrate species. Large alligators, particularly males, spend more time in open water. In general, alligators in Florida consume more fish and turtles—but fewer mammals—than in other parts of the alligator's range in the Southeast.

One interesting fact brought out by this study was that alligators consume large amounts of nonfood items—essentialy "junk." Plant materials (mostly sticks) were retrieved from almost every stomach. Stones were found in 357 stomachs and accounted for four percent of the total contents. Explanations for these "gastroliths" in alligators have ranged from ballast to aiding in digestion. More likely, however, stones may be accidently ingested when food is consumed or mistaken for snails or turtles.

A surprisingly large number of man-made objects were found, constituting two percent of the total contents. Items included shotgun shell wads, lead and steel shot, plastic cigar holders, a cigarette lighter, cigarettes, fishing lures, hooks, plastic worms, fish stringers, bobbers, sinkers, rope, toys, cans, light bulbs, nails, nuts, bolts, dog tags, a spark plug, glass bottles and bricks.

Just what happens to all this debris is uncertain, but it appears to be gradually broken down by

abrasion and the alligator's powerful digestive fluids.

Animal bands and tags recovered from alligator stomachs yielded some interesting information. Bird bands were found from a ring-billed gull that had been banded near Toronto, Canada; a pintail duck banded in the Northwest Territories, Canada; an American coot banded near Mayfield, Wisconsin; and an osprey banded in Gainesville, Florida. These unusual band recoveries provide some insight into a natural mortality factor for overwintering birds.

A numbered fish tag that had been placed on a 7½-pound largemouth bass in 1973 was found in the stomach of an alligator that was taken 10 years later!

Perhaps the most important find in this study was the recovery of numbered, metal alligator marking tags. Seventy-five tags (recovered from 32 stomachs) indicated that cannibalism may be a major cause of mortality for juvenile alligators. A review of our tagging records revealed that some of the alligators were at least four feet long when they were eaten.

Fish—mostly gars, gizzard shad and bowfin—were the most important food for the alligators.

Alligators are versatile, opportunistic predators and will eat just about anything available. Diverse wetland habitats may benefit alligators by providing a variety of food for all size classes. Because diet influences alligator growth rate, condition and reproduction, food habits information will be helpful in evaluating the relationship between alligators and their management in Florida.

PHOTOGRAPH BY JOHN WOODING

Alligators are versatile, opportunistic predators and will eat just about anything available.

Delicate Balance

Species: Schaus' Swallowtail (*Heraclides aristodemus ponceanus*)

Florida Status: Endangered Federal Status: Threatened

Schaus' swallowtail, sometimes known as the Keys swallowtail, was thought to be the rarest butterfly in the world by Florence Grimshawe, who first described its life history in the 1930s. At that time, just 24 specimens were known. She had collected it only from Lower Matecumbe Key. After the fury of a 1935 hurricane lashed the Florida Keys, Ms. Grimshawe was convinced the butterfly had become extinct and its habitat ruined.

"Hesitant as I am to conclude that here, too, *Papilio ponceana* made its last stand," wrote Grimshawe, "I fear it is true. I have sought the butterfly, the eggs and the larvae. I have hunted them under all kinds of weather conditions and from early dawn until sunset, without success."

Happily, we now know Schaus' swallowtail is alive and flapping, though earnest efforts are needed to ensure that it does not go the way of the dodo as Florence Grimshawe feared it had. Schaus' swallowtail is confined to an extremely small area: Elliot Key and north Key Largo. The precarious balance between organism and habitat is nowhere more evident than here. Though Elliot Key is a national monument, north Key Largo has undergone much development in recent years and all insects are subject to the aerial spraying for mosquitoes.

To ensure the survival of this butterfly, it may be necessary to designate portions of north Key Largo a national wildlife refuge. Collection of this species can also be limited by requiring permits.

Taxonomically, *Heraclides aristodemus ponceanus* is a subspecies of *H. aristodemus*, the so-called dusky swallowtail of the Greater Antilles. Typical *H. aristodemus* occurs in Haiti and the Dominican Republic in small numbers, but it is not common. Another subspecies, *H. aristodemus temenes*, is found on Cuba and the Cayman Islands. Schaus' swallowtail is found only in Florida and has been ranked as critically imperiled globally. It has top ranking of the *Florida Natural Areas Inventory*. Despite this ranking, and the fact that it was one of the first insects to receive threatened status in the Federal Register, the population has continued to decline.

Schaus' swallowtail was first captured in May 1898 by Dr. William Schaus in the great Brickell Hammock near Miami. It was described by him in the *Entomological News* in 1911. To look at, it is perhaps most similar to the giant swallowtail, H. *cresphontes* and the palamedes swallowtail (*Pterourus palamedes*). However, the giant swallowtail is larger and has less yellow on the tails, which have dark edges. The palamedes swallowtail is also larger and is darker on the underside. The most striking features of Schaus' swallowtail are its modest size (89-95 mm wingspan) and general brown/black ground color to the wings instead of the normal deep black coloration of most swallowtails. The tails of the hindwings are long, brown and yellow-edged. On the underside, the wings are colored with blue in broad crescents and there are also chestnut-brown patches on the hindwings.

The natural hosts for the caterpillar are torchwood (*Amyris elemifera* L.) and wild lime (*Zanthoxylum fagara*) though it has been reared in confinement on prickly ash (Z. *americanum*). The eggs are green and are attached to the undersides of leaves. Larvae are brownish and mottled with tan and white cryptic maculation (spots). The osmaterium (a forked organ that protrudes from just behind the head when the caterpillar is annoyed) is white. Amazingly, some pupae will take two years to hatch, others only one. There is generally only one brood a year, a propagational disadvantage that should certainly be kept in mind when the safety of this animal is considered. The flight period is between late April and early June, with a peak in May. Most sightings occur in openings in hammocks; indeed this specimen was taken at just such a spot on May 12, 1972 by Steve Atkins during the course of research.

—Peter Stiling

FLORIDA WILDLIFE'S Winners — CATEGORY C Other Wildlife

First Place: Gail Shumway; Sarasota, Florida; *Zebra Swallowtail*

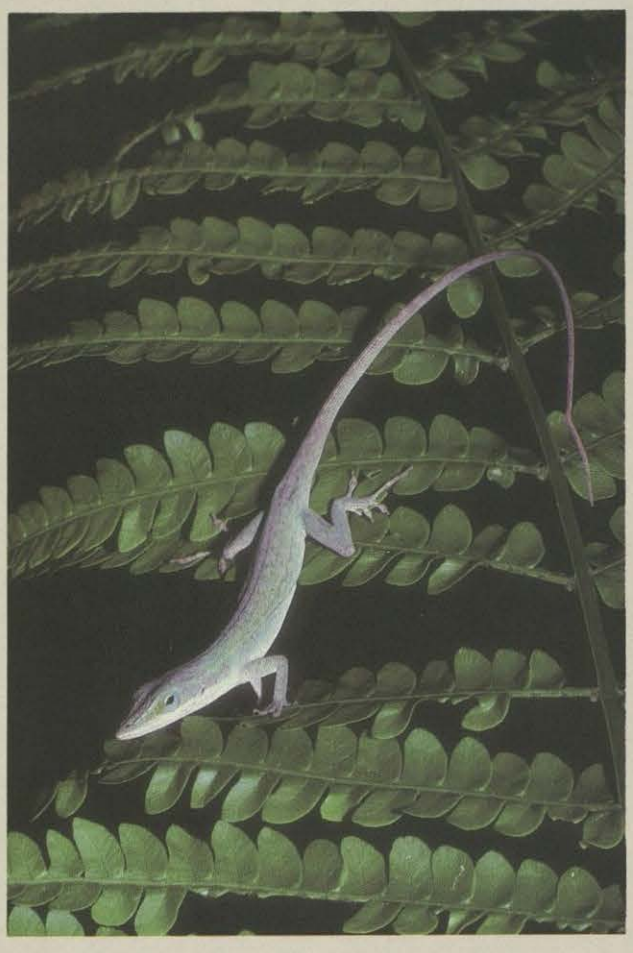
The beauty, complexity, color and form of Florida's insects, reptiles, mollusks and landscapes can be sampled from our 1987 photography contest winners. As with the birds and mammals categories, published in the September-October issue, choosing the winners was a challenge to the judges.

Some of the winners in the first two categories also ranked high in the two categories shown here. Gail Shumway won First Place in the category for wildlife other than birds and mammals and Third Place in the category for the environment and man's interaction with the environment. She previously won two honorable mentions in the birds category.

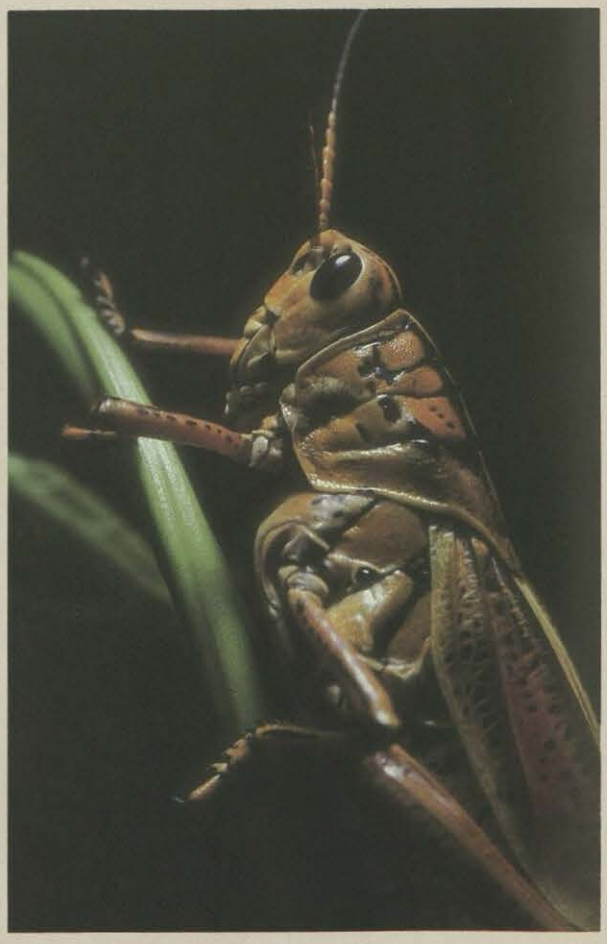
Henry H. Holdsworth was another photographer who was recognized for four winning photographs. His Third Place winner and honorable mention are printed in this issue. Previously, his red-shouldered hawk won Second Place and he received honorable mention for a picture of an armadillo.

Second Place: Jack Cushman; Ocala, Florida; *Male Broad-Headed Skink*

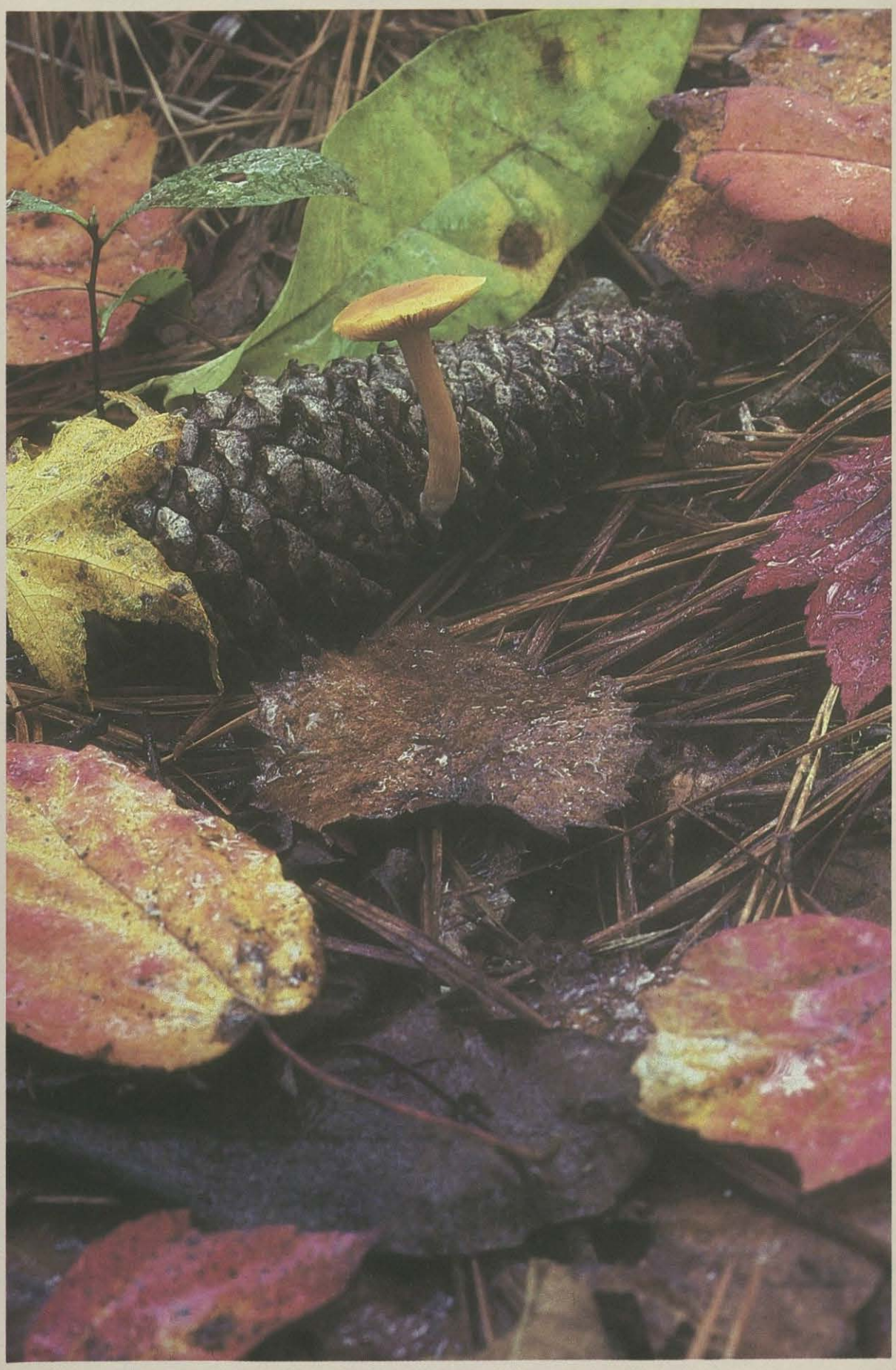
Third Place: Henry H. Holdsworth; Jackson, Wyoming; *American Alligators*



Honorable Mention
Henry H. Holdsworth
Jackson, Wyoming
Carolina Anole



Honorable Mention
Patricia Hanbery
Bradenton, Florida
Lubber Grasshopper



First Place: Fred Worrill; Tallahassee, Florida; *Forest Floor at Three Rivers State Park*

Second Place: Wayne Reichart; Jupiter, Florida; *Sunset Over Water*

Third Place: Gail Shumway; Sarasota, Florida; *Horse Conch Shell*

Honorable Mention: Erick Shumway; Sarasota, Florida; *Sunrise Over Water*

Honorable Mention: Kenneth Jordan; Winter Park, Florida; *Fishing at Sunset*

Blitz

Henry Kritzler

portraits of hunting dogs

Henry Kritzler, of north Florida's small coastal town of Carrabelle, first began to draw and paint while he was a young child in his native New York. Even as a youngster, Kritzler was dedicated to wildlife and the outdoors.

Before he was old enough to join Boy Scouts of America, he was teaching Boy Scouts about birds so they could earn merit badges in bird study. He was also active in his school's biology club.

After high school graduation in 1930, he attended Pratt Institute on a scholarship which was part of an education program in New York City. "I had aimed at that scholarship all through high school," he remembers.

Kritzler worked as a naturalist in Harriman State Park in New York for seven consecutive summers, beginning in 1930. And while at Pratt, he was an active member of the Linnean Society. He also served for a while as president of the Queens County Bird Club, during which time he led the club in a successful effort to have 13 acres of land in New York City designated as a bird sanctuary.

"Once we had the park approved," he recalls, "we sponsored bird house building contests. We had students in every high school woodworking shop in the city building bird houses, and we received a tremendous number of them. We placed every one in the park.

"We also put out food during the winter, planted trees, kept records of the species sighted there and managed it as a public park."

After attending Pratt, Kritzler went back to college, "Mainly because there were no jobs in the art field."

He spent eight years earning his Doctor of Philosophy in biology, then took his first job out of college with the United States Air Force as a recruit. He advanced from "buck private to master sergeant," while in the military.

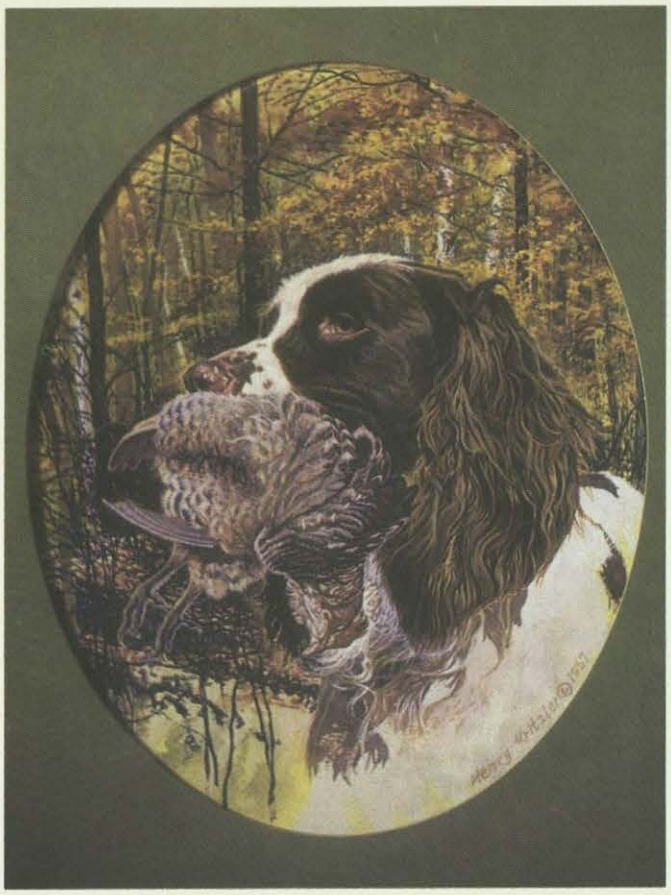
It was after World War II and his stint in the Air Force that he entered his major career in life—teaching at the college level. In 1961, he visited Florida to teach during a summer term at Florida State University (FSU) in Tallahassee. He continued to teach each summer term there until 1967. That year, he become a professor of oceanography at FSU.

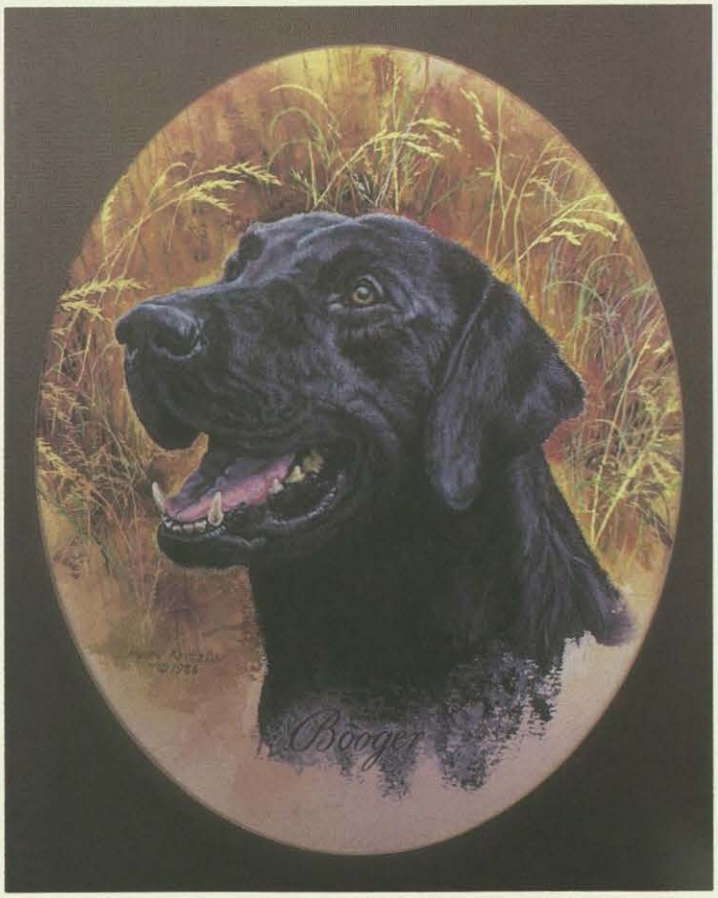
He retired from his professorship 10 years ago, then returned to practicing art. "At first, I painted old houses, churches and similar subjects," he says, "but about two or three years ago, I decided to specialize in dogs—especially hunting breeds."

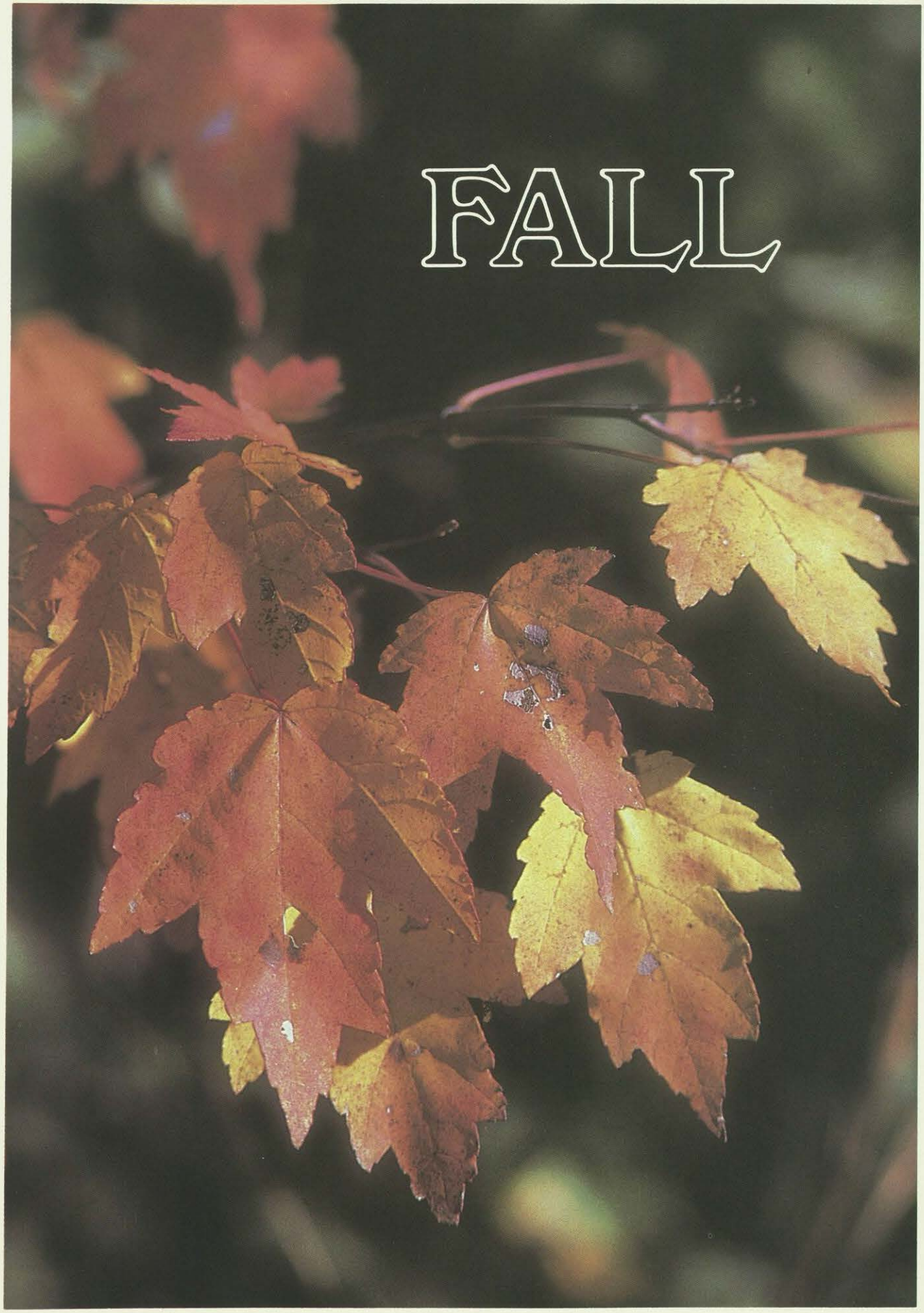
Kritzler's first dog portrait was of a poodle, but some of his more recent works include the sporting breeds shown here. In November, his works were awarded four Blue Ribbons—three of them for his dog portraits—in showings at the North Florida Fair.

Henry Kritzler's fine oil paintings are sure to bring more acclaim in the future as he continues to capture "man's best friends" on canvas.

—John Waters Jr.

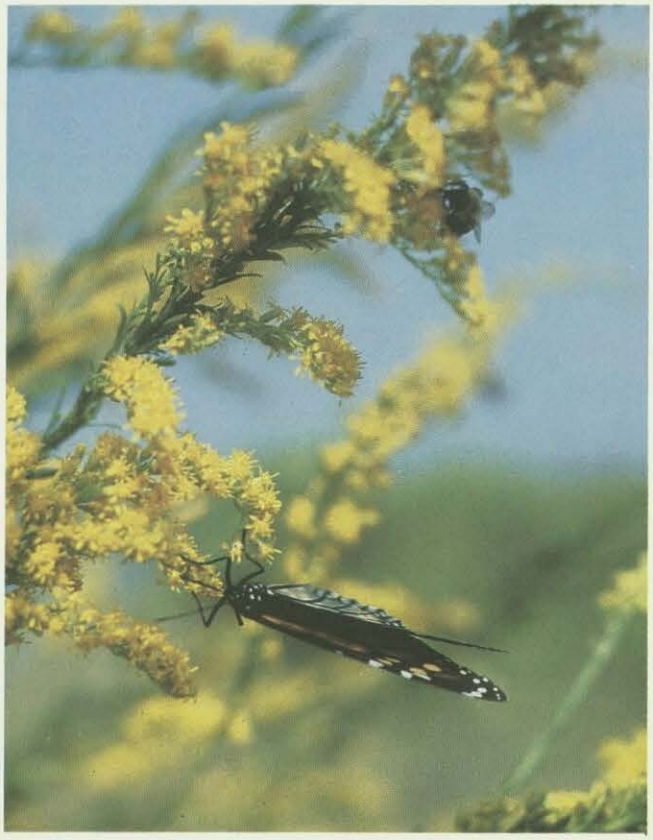


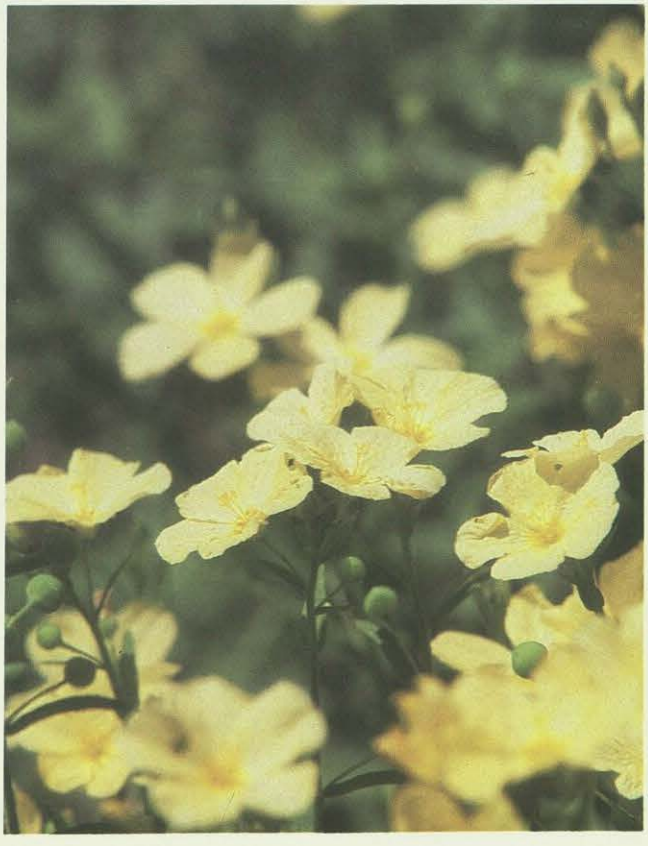

Booger


FALL

Text and Photographs
By John Waters Jr.

Fall in Florida is a subtle season, a metamorphic time when Nature shows Humankind and the Universe her finest jewels—spectacularly rich in color and endlessly varied in form. Autumn here is the beginning, maturity and continuity of a synchronized eternity. The flowers, fruits, nectar, nuts and creatures that provide the harvest to us are a bountiful feast for the senses. Come look, see, smell and hear, for already the alluring symphony of spring is in the air.





Tsala~Apopka — A

By Bob McNally

Few states have as many prime bass waters as Florida. Thousands of lakes, ponds, rivers and streams dot the state, and the bulk of them have good fishing. Rare is the water that is unique in the Sunshine State, but, Tsala Apopka is one such place.

At 19,000-acres, Tsala Apopka is one of the largest, most interestingly beautiful and productive big bass waters in Florida. Tsala Apopka is an Indian name meaning "many waters." Indeed, there are about 50 small lakes (many unnamed) that make up the Apopka "chain," which is located in the west-central part of the state near the town of Inverness. But unlike many lake chains, Tsala Apopka is mostly natural—only a few man-made boat trails or canals lead from lake to lake.

There are dozens of islands, hundreds of miles of productive, cypress tree-lined and weedy shorelines. Many "finger lakes" weave and wind for miles. Anglers even have access to the picturesque and fish-filled Withlacoochee River because a couple of the lakes in the southern reaches of Tsala Apopka are connected to the famed river.

There are more than 30 square miles of open fishing water on the chain, and there's very little lakeside development compared to many other Florida waters. Such an extensive lake chain, with so much shoreline, allows for pleasant, uncrowded fishing. Anglers working some of the smaller, out-of-the-way lakes often can fish for an entire day without encountering another boat or person.

The lakes average 12 to 15 feet deep, with a few holes up to 25 feet. Apopka is stained a slight "tea" color from tannic acid. It has a hard sand bottom and is jammed with all types of shallow-water cover—flooded cypress trees, peppergrass, lily pads, sawgrass, hyacinths, hydrilla and cattails. Some of the more productive bass spots on the chain are near lily pads and grass banks where the water depth is five to seven feet. Excellent fishing can be had along such deep banks, particularly near points.

Tsala Apopka is mostly natural—only a few man-made boat trails or canals lead from lake to lake.

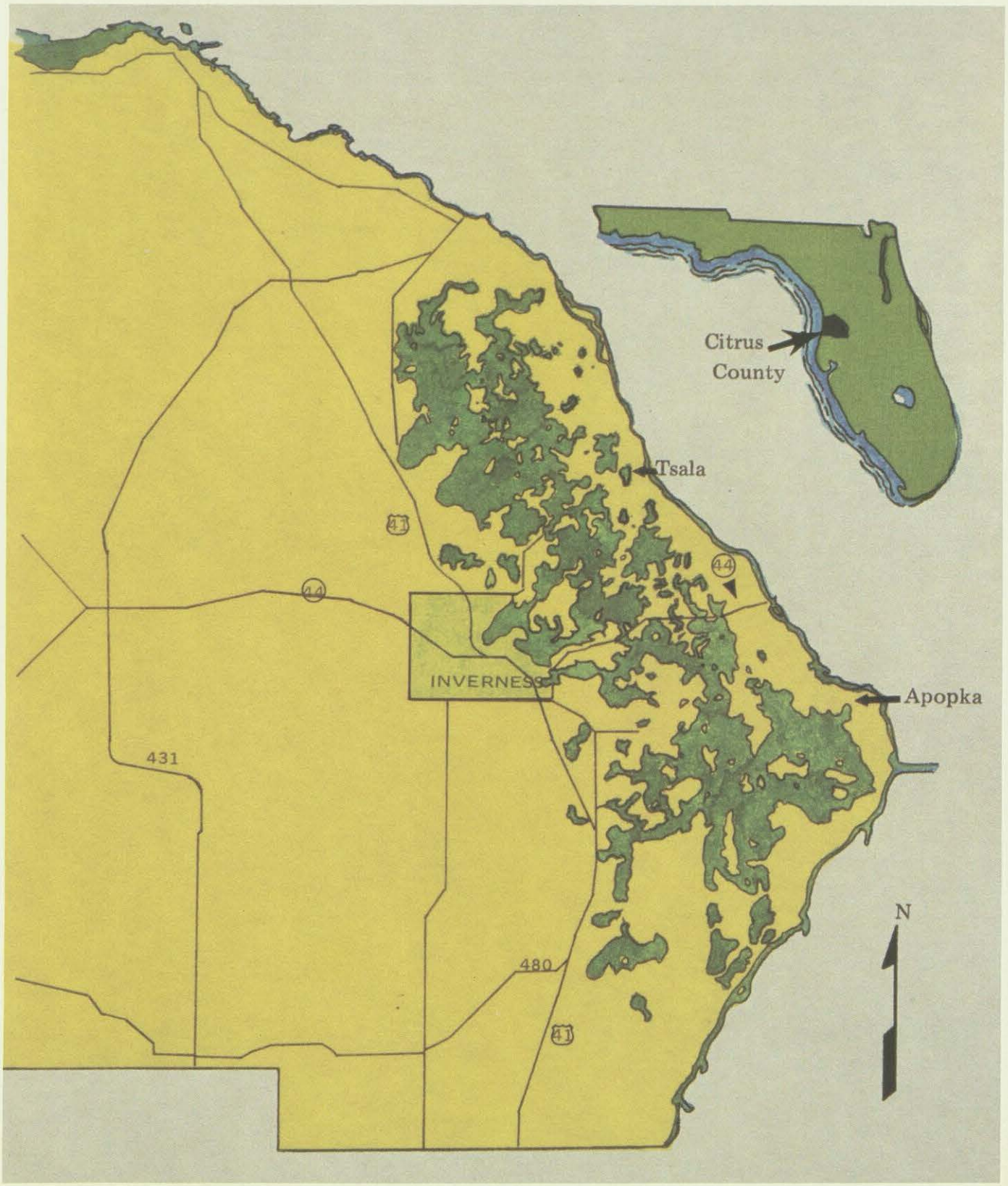
Plastic worms and crankbaits are among the most deadly lures. It was a crank-bait that produced the chain's record largemouth—weighing 15-pounds, 3-ounces—for bass guide and fishing camp owner Bud Andrews. That fish was boated in September from Little Henderson Lake, one of the best and most popular bass spots on the chain. And to show that fish wasn't a fluke, Andrews also has taken a 13-pound, 15-ouncer from the chain—on a crankbait.

Landing a 15-pound, 3-ouncer from a Florida lake in fall may sound unusual to some anglers, but Andrews says autumn largemouth bass fishing on the Tsala Apopka lakes is outstanding. In October and November, it's common to see huge schools of largemouths chasing bait fish on the surface, and many of the bass are big. Weights of four to six pounds are not unusual, and eight pounders have been taken from surfacing schools. Shad-like crankbaits are deadly on the schoolers.

February through April is a top time for the chain's heavyweight bigmouths. Plastic worms and silver- or gold-colored, floating-diving "Rebels" are very popular in spring, especially when worked around weedy points early and late in the day. May is a good month for topwater lure fishing when bass come off their spawning beds and feed well to replenish the energy spent procreating. May is also a great time for fly rod bass fishermen to work the chain. The fish feed well early and late around shoreline vegetation, and weedless streamer flies and small popping bugs produce some big stringers of bass for anglers who know how to work a fly rod well.

In summer, good fishing can be had in five to seven feet of water off points of land where sawgrass and lily pads grow. "Flipping" with plastic worms and jigs is productive in the deeper weeds during bright weather. Some of the lakes also have big beds of hydrilla, and lots of heavyweight bass are caught in and around such weeds. Often the best hydrilla beds are ones in deep water. The deep-water hydrilla is especially

Natural Bass Fishery



productive in late spring and early summer when it is growing a few feet off the bottom.

Top hot-weather largemouth bass action also can be found in canals that connect the lakes on the chain, and around some of the deep spring holes that bubble up from beneath some of the lakes. The spring holes, as well as the Withlacoochee River, are good bets for cold-weather winter bassing. The spring holes in particular are good for bass, but can be difficult to locate without the help of a competent guide.

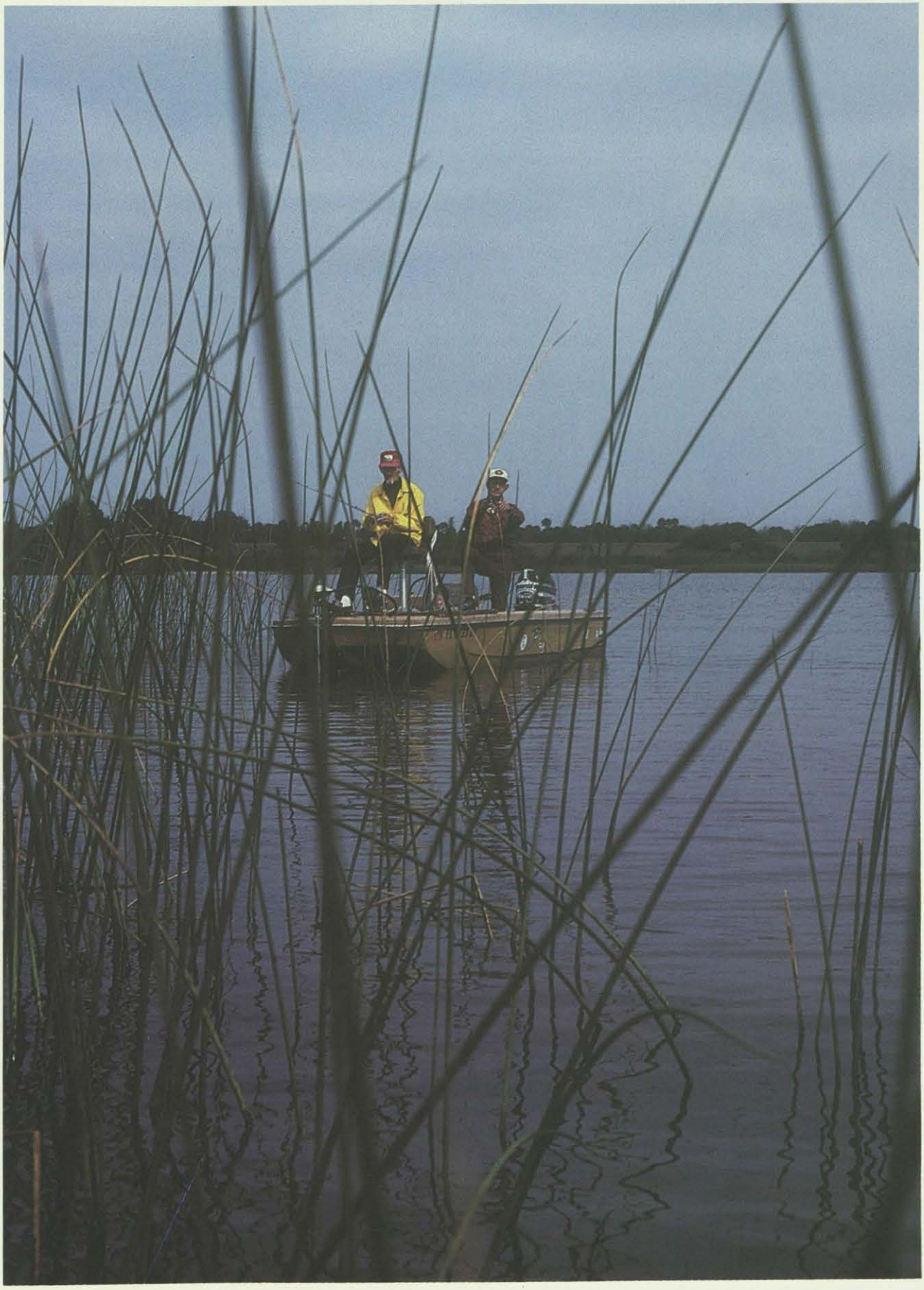
Thousands of sunshine bass (striped bass x white bass hybrids) have been stocked in Tsala Apopka and they provide an excellent fall through spring fishery. Even summer fishing for them can be good, normally in early mornings, late afternoons, at night or during overcast or windy weather. The bigger lakes are best, and at times hundreds of sunshines can be seen surface schooling on shad. "Hot Spots," "Sugar Shads," and "Rat-L-Traps" all work well, and trolling the lures is a good way of locating sunshines when they're not breaking water. Big and Little Henderson, Big and Little Spivey lakes all are good for sunshines, which generally weigh under six pounds.

Like most Florida waters, winter (December through March) is prime time for crappies, and most of the larger lakes on the Tsala Apopka chain offer excellent fishing for this popular speckled panfish. Night fishing around the Florida 44 bridge is a popular way of taking the lake's crappies.

Bream fishing is best in the warm months, from May through September. Almost every lake in the chain can have outstanding bream action, and limit catches of 50 fish per angler per day are not unusual when fish are on the beds during the full moons in May and June.

Boats and motors can be rented on the west-central part of the lake chain. One commercial lodge also rents lakeside efficiency cottages for $35 per night ($175 per week) and has a boat launching ramp, docking facilities and a bait and tackle shop. Good restaurants and motels are available in nearby Inverness.

PHOTOGRAPH BY FGFWFC



PHOTOGRAPH BY JIM FARRIOR

A Tale of Two Turkeys

By Aubrey Martin

Fall Is Turkey Time

For many years, Florida has been a top wild turkey state. The state's present estimated population of 85,000 birds is sufficient for hunters to double their recreational opportunities by hunting a spring and a fall season. Some hunters hunt the wild turkey only during the spring season simply because they prefer to spend their fall time hunting deer; however, other hunters are not aware of the excitement and thrills fall turkey hunting has to offer. When you use the right tactics, it can be fabulous!

Locating turkeys may be more difficult in the fall than in spring, however. Finding tracks does not always mean you are onto the game. The fall range of wild turkeys is larger because the birds generally move around more that time of year in search of food. This requires more walking for the hunter. However, if you are willing to go after the game and use the right tactics, you will find great adventure. Follow the signs—tracks, droppings and scratched out areas—until they appear fresh, and you will be close to some action.

Suppose a hunter is moving quietly through the woods in search of turkeys and he spots a flock of young turkeys feeding through a hammock, 150 yards away. Trying to call the turkeys to his position probably will not be the best procedure because a flock will expect a lone turkey to approach it. A better method would be to determine the general direction in which the flock is moving, then quickly and quietly move ahead of it, set up in natural cover and wait for the flock to approach. This will often present the chance for a shot. If not, there is another, more exciting opportunity: rush the flock, making as much noise as possible to scatter the birds. When young turkeys are separated from the mother hen and other young, they become eager to regroup.

Scattered young turkeys will often begin calling at a rapid rate and may come to a hunter even if he is a poor caller. The fact is, young turkeys are not very good callers either.

Sometimes it may be necessary for you to initiate calling. Begin with soft "clucks" in case the game is close. When you get an answer, repeat whatever call the turkey uses. If there is no answer to your soft calls, use the "lost" call. This is a more strident call of eight to 12 notes, which communicates anxiety.

Follow the signs until they appear fresh, and you will be close to some action.

The "Kee-Kee" of a young turkey is also a good call in the fall. The young birds learn to "Kee" before they learn to "Yelp." This call resembles a soft whistle as used to call a dog. It can be made with a slate-type caller, but is better done with a diaphragm mouth-caller.

Scattering old gobblers also works, but they usually do not regroup so soon. They are used to being alone and they seldom show the same anxiety as younger birds. However, after time elapses, they will usually seek the companionship of other turkeys.

When wary old birds are scattered in the morning, they usually wait until afternoon before getting back together. If scattered in the afternoon, the next morning would be a good time to try calling them, preferably from the flush site before daylight. After being alone all night, gobblers will be expecting to hear from the others early. Start with coarse "clucks" and wait five minutes for the birds to respond. If there is no answer repeat the clucks a few times.

As when calling young turkeys, it is best to repeat the same calls the turkey uses. If there is no response to your close calls use the louder "lost call" of mature gobblers. This call is similar to the lost call of the younger turkeys, but is much coarser in pitch. If no turkeys are heard or seen within an hour, then it is advisable to walk quietly through the turkey range clucking and soft-calling along the way. Sometimes this tactic will get the results you want.

Roosting turkeys is an excellent tactic for fall hunting. When the great birds fly up into their roosting trees around sundown, their wingbeats may be audible from a distance of 200 yards or more. If you locate a roost area, you may be able to call the birds late in the evening and watch them fly up into the trees.

Be in the woods close to the roost site the next morning—before daylight. If the turkeys are older gobblers, try to call them to your position. They may fly down within gun range. If not, you may be able to entice them with soft clucks and yelps. If the flock is made up of young turkeys, scatter them by getting under the roost area and making a noise before daylight. They will be eager to come to your call at first light.

A Fall Turkey Hunt

The December morning was cold and brisk as I walked the old woods

PHOTOGRAPH BY PHILLIP M. POLLACK

road leading to wild turkey country. While scouting the previous day, I found plenty of turkey signs on private land, where I had permission to hunt, in Madison County. Large scratched-out areas on the forest floor indicated a flock of wild turkeys had been feeding there earlier the same day. There was a good chance the regal birds would be roosting near where I planned to set up for the morning hunt. The anticipation of an encounter with wild turkeys gave me goose bumps!

The freshness of the morning and the cheerful melodies of songbirds was invigorating as the eastern sky began to brighten. Settling down in natural cover, with my back against a large oak tree, I reached for my trusted mahogany box caller. The first couple of clucks brought no response, so moments later, I queried the woods with a soft "tree yelp." Immediately, a turkey responded from a roost tree down the ridge. I was thrilled because the turkey's call seemed to be no more than 75 yards away. In short time, a second and third turkey called with excited yelps. I promptly responded with the lost call of a young turkey, then the entire flock joined the melody—one bird called then another. At times, two turkeys were yelping together. It was a turkey hunter's dream, sweet music to my ears.

Suddenly, there was quietness—and time to be ready for action. My finger was near the trigger but I was not expecting what happened next. Within about five seconds, turkeys were all around me. There were no warning sounds—they must have glided in without a single wingbeat Several landed in the trees overhead while others came to the ground in front of and behind me. One flew by so close I could have touched it.

I was dressed in complete camouflage, which prevented the turkeys from being aware of my presence while I regained my composure. The flock consisted of two old hens and about a dozen yearling birds of both sexes. I selected the largest young gobbler in good range, touched the trigger and scored! It was not a trophy gobbler, but it was a delightful entree for our Christmas dinner.

Spring Turkey Hunting

There is nothing like the enchanting thunder of a gobbler's spring call. Spring turkey hunting is different from fall turkey hunting in many ways, and locating spring gobblers is not difficult; when you find tracks four or more inches in length and width you are in business. Gobblers do not move around in spring as much as they do in fall, and when the tracks are fresh, you are usually within hearing distance of the male turkey's tremendous gobble.

In the spring, gobbling begins at first light. The most critical tactic in

PHOTOGRAPH BY DAVID AUSTIN

I have called and bagged birds within five minutes using this tactic.

hunting spring turkeys is setting up for calling the gobbler to your position. The closer to the game you set up, the more gobblers you will take home. Some hunters feel that 150 yards is good range for calling, but I try to get within 75 yards. To do this you need to be in the woods a while before daylight.

I often entice a turkey to gobble by hooting like an owl. When a turkey gobbles in response, it gives away his position. When it is still on the roost, taking advantage of dim light and the cover of trees, I move in close. That is one secret.

When you are very close and make a soft "hen yelp," the gobbler often acts as if a hen has come to him. I have called and bagged birds within five minutes using this tactic Of course you have to be very careful not to spook your game.

Florida's Record Gobbler

After the 1987 spring turkey season, I am certain John Farhat of Jacksonville will concur with my feelings about hunting turkeys during that time of the year. He bagged a 26-pound gobbler last March. He learned later it was a real trophy—and the largest gobbler ever taken in Florida. Sergeant Thomas Duncan of the Commission was called in to attest the weight, and The National Wild Turkey Federation (Edgefield, South Carolina) verified that Farhat's gobbler was a new record for Florida.

About an hour before the break of day that cloudy spring morning, Farhat arrived at one of his favorite turkey haunts in Clay County. To his dismay, about the time turkeys should have begun gobbling, rain began to fall. However, he is a dedicated hunter who was not discouraged. Even in the rain he heard a short gobble in response to his calling.

Later, around 8 a.m., the sky cleared and the sun shined. As Farhat moved toward the place from which the sound of the single gobble had drifted earlier, he suddenly spotted two gobblers and two hens together in an open field about 200 yards away. Off to one side of those four turkeys, two enormous gobblers were strutting!

He slipped through the pines and palmettoes within 100 yards of those huge turkeys, and from his new vantage point, he had a much better view of them. "Could the big one be the giant gobbler I've hunted the last four years?" he asked himself. He believed it was.

Farhat then became very anxious. He had worked that wary bird before, and he knew how tough the old gobbler was. Every move he

PHOTOGRAPH BY FGFWFC

made would be critical. As soon as he sent the two strutting gobblers a mating yelp, the larger one gobbled and strutted, then moved in the direction of the other four birds.

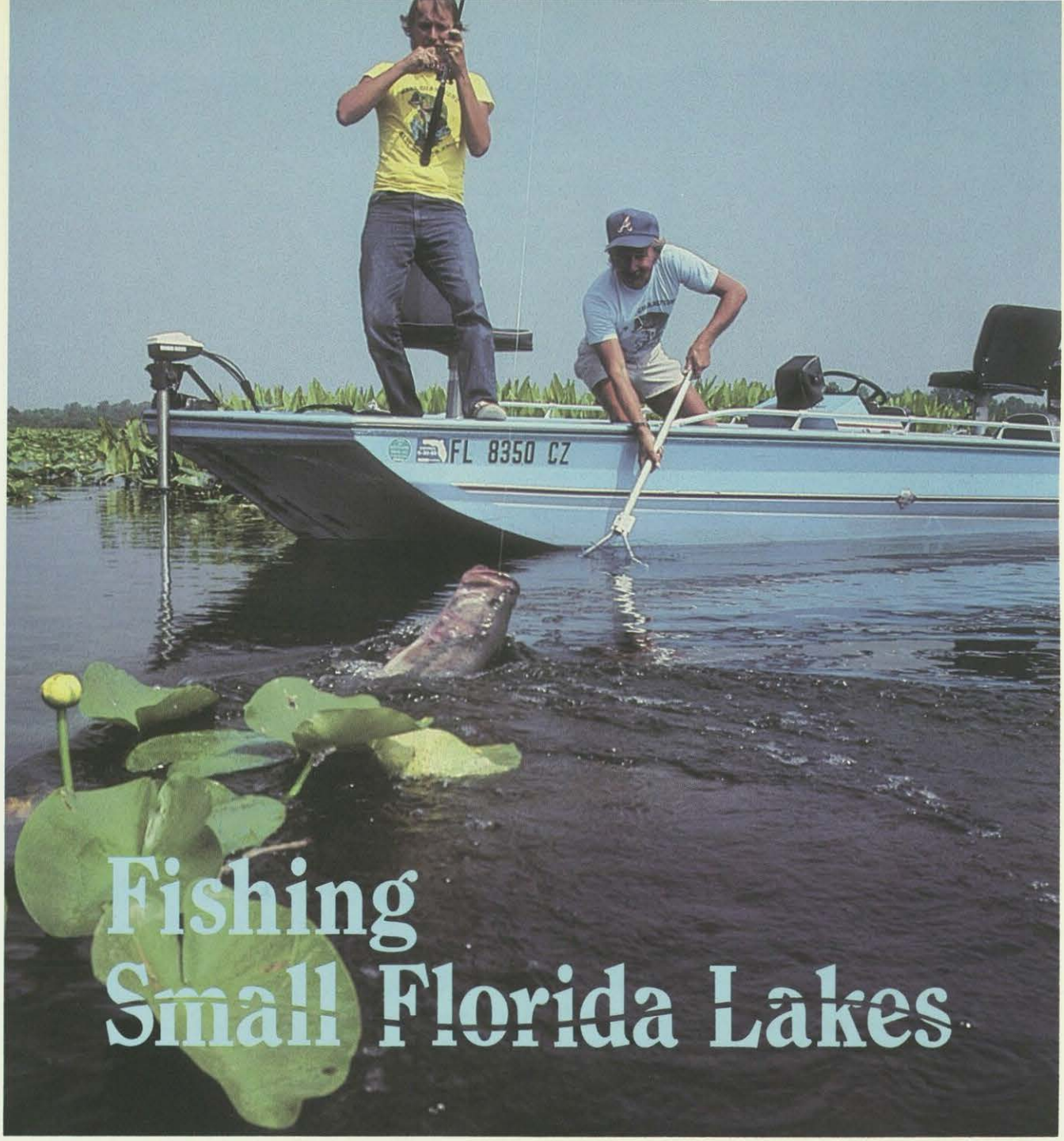
Farhat gobbled quickly with his caller and the big bird turned and started toward him. The smaller strutting gobbler followed. Farhat knew he would have to play it very cool, not calling too often, but just enough to keep the big boss interested. By then, Farhat could see the two gobblers crossing a woods road and entering a fire lane to his left. If the birds continued down the fire lane, Farhat knew he would have to shift his position in order to get a clear shot. The problem was solved when the turkeys passed behind a pile of dirt, giving Farhat a chance to move while the turkeys' vision was obstructed.

When the two gobblers came back into view, they were only 20 yards away. Farhat's gun was aimed and ready, but the way they were standing, he could not fire without the possibility of killing both turkeys. He wanted the big gobbler, but he didn't want to compromise his good sportsmanship by killing two turkeys when the daily bag limit is only one.

Farhat saw something that made his heart skip a beat.

He held the shotgun at ready until his hands began to shake. Finally, the smaller turkey moved away and Farhat collected the largest gobbler ever taken in Florida.

NOTE: If you hunt on Florida's wildlife management areas, keep in mind that regulations vary from those governing privately owned lands. Also, the regulations vary from one area to another. Consult individual regulations and map brochures for the area in which you plan to hunt before you go. These are available at county tax collector offices, at many other places where hunting licenses are sold and at the Commission's regional offices. They are free of charge.



PHOTOGRAPH BY BOB McNALLY

Fishing Small Florida Lakes

By Bob McNally

It was a day designed for bass fishing. The sky was putty gray. A balmy breeze rippled the lake's surface and stirred tree-top moss. Not another fisherman was in sight when Jim Strader of Havana, Florida, and I launched my modern bass boat into Alligator Lake, located in the north Florida town of Lake City.

For three hours we fished deep water, shallow water and in-between water. We tossed plastic worms, spinner-baits, diving plugs, jigs, surface lures and even live shiners, but we had not one hit from a bigmouth. In fact, the only action we had was when Jim took a 10-pound mudfish on a diving plug.

Finally, as we were preparing to leave Alligator, we saw a large swirl tight to the shore, near a steep bank on the lake's north side. I quickly ran the boat to the swirl and cast a spinner-bait to it. Instantly the water boiled as a fish took the lure. Several minutes later I boated a six-pound largemouth. For the next hour we worked the bank with spinner-baits and landed nine bass weighing three to 7-½ pounds. When the fishing slowed, we loaded the boat and trailered it a few miles to Watertown Lake.

Watertown, located just northeast of Lake City, is only 46 acres in size, but the clear, fertile lake has a good reputation for largemouths among local anglers. The lake also has a good population of sunshine bass. We launched the bass boat and started working shoreline cover.

Jim dropped a Texas-style plastic worm—rigged with a "Rattle-Worm Head"—along the deep edge of a

submerged grass bed. When his line tightened and moved sideways, Jim set the hook hard and a pot-bellied bigmouth catapulted out. Then the fish came straight for the boat. Jim reeled fast to keep a tight line and the bass darted around the transom. He soon worked the fish alongside the boat and I netted it. It scaled just under eight pounds.

For two hours we plugged the lake's shallows and deep water, and though we caught a number of bass weighing up to three pounds, we didn't locate any other large fish. So, we left Watertown and drove 10 miles east to Ocean Pond, where we launched the boat at a free public ramp at the south end of the lake, just north of Olustee. We motored west and started fishing along the bank.

Ocean Pond has 1,700-acres and is round, shallow and very clear. This lake generally offers its best bassing during windy, overcast weather and at night. The bowl-shaped lake is devoid of obvious structures, so shoreline areas are the most likely places to start fishing. However, the Commission has placed about a half-dozen man-made fish attractors in the lake. They're marked with buoys and occasionally they give up good catches of largemouths.

Ocean Pond's shallows are some of the "bassiest-looking" water an angler could ever hope to see. Huge cypress trees stand in the lake like lonely moss-shrouded sentinels. Weedbeds and grassy islands pepper the water near the trees. Every little grass bed and tree looks as if it should hold a bass.

A slight drizzle began falling as we worked through the cypress trees. Jim fished one of his firm's "Diamond Rattler" surface plugs, while I worked a spinner-bait. We fished for about 20 minutes without a strike, then Jim took three small bass in quick succession by working his top-water across the outside tips of weedbeds. I immediately switched to a "Diamond Rattler" and when I brought the lure past a cypress tree point a barrel-sized swirl welled up around the lure and it disappeared. I set the hook and the bigmouth made two back-to-back leaps—gills flared wide, head shaking side-to-side and water spraying for yards around. Then it swam near the boat and Jim swooped it up in the net. The fish weighed a healthy nine pounds, nine ounces.

Before the day ended we caught eight more bass, most weighing under three pounds, though Jim landed a matched pair of 4-½-pounders on successive casts.

Alligator, Watertown and Ocean Pond are three typical north Florida largemouth lakes—loaded with bass, but surprisingly lacking bass anglers. Not every trip to these (and other) north Florida lakes are as productive as the jaunt just described, but over the years I've had consistently better bass fishing on the little-known north Florida lakes than I've experienced on many of the state's larger, more noted waters.

One major plus for north Florida's small lakes is that there are so many of them located so close together that it's easy to sample two, three or more of them in a single day's fishing. This is obviously advantageous because if one spot isn't giving up bigmouths, anglers simply can drive to another lake nearby.

It's important to understand at the outset that many of these small, out-of-the-way, north Florida lakes have no "improved" launching ramps, and some are so small and shallow that most anglers with large bass boats and motors pass them by for bigger water with better access. This is a blessing for anglers with small skiffs and little outboards since many of these lakes receive almost no serious bass fishing pressure. Moreover, a bass angler with even rudimentary fishing knowledge can more effectively cover a small lake than a sprawling reservoir or river. During the course of a day's bassing on a small lake he's more likely to locate fish, simply because there's less water to check.

From Lake City west to Tallahassee and south to Gainesville there are many dozens of superb, small, bass lakes (many having outstanding bream and crappie populations, too) that are simply not fished by many people. I've always believed an angler could fish this area for most of his life and still not tap all the prime small lake bass water available to him.

No doubt the most difficult part of fishing north Florida's small lakes and ponds is learning the location of prime waters. There are no shortcuts to finding your own personal favorites. A lot of legwork is involved. One of the best methods of finding little-known bass waters is with detailed county maps. Such maps show tiny potholes, borrow pits, orange grove lakes, marshy sloughs and other similar places where enormous bass frequently reside. Just as important, the better maps detail all access roads in the area. County maps can be purchased through retail outlets in most major north Florida cities. The Commission's Office of Informational Services also has maps of a few north Florida lakes which are specifically managed for bass and panfish. The most handy county map reference I've found is the "Florida County Maps and Recreational Guide," which contains a map of each of the Sunshine State's 67 counties. The book is available from the Florida Wildlife Federation, P.O. Box 6870, Tallahassee, FL 32301.

A number of excellent little bass lakes are located along the eastern edge of the Apalachicola National Forest, southwest of Tallahassee in Leon and Wakulla counties. Not all of them offer spectacular bass action, and some are difficult to reach without a four-wheel drive vehicle, but there are several great bass waters in the forest, some of which are so remote they are unnamed.

Borrow pits are also overlooked and underfished north Florida bass hot spots. The pits were made when land fill was needed for constructing highway overpasses. There seems to be a borrow pit or two around every overpass along Interstate Highways I-95, I-75 and I-10. Most are under 40 acres in size and are usually privately owned, but I have found permission is easy to get since few people request it. I've often been

told by borrow pit owners that there were just a few small bass in their ponds, only to learn later by fishing them that the waters were stiff with huge mossbacks. I've taken many bass weighing six to eight pounds from borrow pits in north Florida, and the biggest bass I've ever seen was in such a lake. I won't say how big I believe the bass really was, but I know it was well over 15 pounds, and still, for all I know, inhabits that pit. Many borrow pits are crystal-clear, so dawn, dusk and night fishing are most productive.

Even the smallest, marshiest-looking north Florida sloughs and potholes—some smack in the middle of well-traveled areas—can harbor tremendous bass. I once watched a freckled-face kid hook, fight and land a 9-½-pound bass from a small, barren-looking pond located beside a bustling gas station not 50 yards from I-75. I wouldn't have believed a fish that size could have lived in the little two-acre highway drainage lake. But I saw the kid catch it—a bass many anglers would gladly swap a year's supply of plastic worms for. And best of all, he caught it on a glob of dirty old earthworms.

I've discovered several great largemouth bass ponds over the years during dove and deer hunting trips. Some have been on Florida's public wildlife management areas, including Apalachee, Steinhatchee, Aucilla and Tide Swamp—all located in the Northwest Region.

I know several wild-eyed north Florida bass fishermen who periodically go up in small airplanes and fly over rural areas looking for off-the-beaten-path, unmapped ponds and small lakes. They frequently locate bass bonanzas in tough-to-get-to cypress swamps and isolated forests. They annually catch an amazing number of bigmouths weighing over eight pounds, and one year, one of them took a bass from a secluded spot that weighed just shy of 14 pounds. He won't tell me where that pond is located, and I don't blame him!

In addition to the lakes already mentioned, some of my favorite small north Florida bass waters include Peacock, Blue, White and Low lakes, Long Pond, and Lakes Ogden and Louise located near Lake City and Live Oak. Most of these lakes are open to public fishing, but to sample some of them (such as Low Lake near Wellborn), anglers are charged a small launching fee. At Low, for example, you must stop at a rural gas station and country store and pay the proprietor a $1 launch fee. He'll then give directions to the isolated lake.

Other north Florida lakes worth testing for bigmouths include Watermelon Pond, Lake Altho, Moss Lee Lake, and Little Lake Orange in Alachua County; Lake Crosby and Hampton Lake in Bradford County; Lake Johnson, Smith Lake, Lake Brooklyn, Lowery Lake, Magnolia Lake and Blue Pond in Clay County; Lake Jeffrey and Long Pond in Columbia County; Governor Hill Lake in Dixie County; Seven Mile Lake and Four Mile Lake in Gilchrist County; Fort Atkinson Lake and Koon Lake in Lafayette County; Chunky Pond in Levy County; Cherry Lake, Lake Francis and Mystic Lake in Madison County; George's Lake and Cowpen Lake in Putnam County; Lake Louise and Suwannee Lake in Suwannee County; and Blue Spring Lake in Taylor County.

The character of many north Florida small lakes varies. Some are less than four feet deep and are essentially "prairie-type" waters. Others are dark in color with standing cypress trees along their shores. And still more are deep, clear and have suprisingly excellent structures in the form of holes, dropoffs, sandbars and submerged islands. Low Lake, for instance, looks like something you'd find in the upper Midwest. The 80-acre spot is surrounded by hardwoods and rolling terrain. The shallows are studded with fallen timber and stumps, and it has plenty of deep water adjacent to vast flats. Such variety in the lake types available to anglers makes north Florida bass fishing particularly enjoyable.

As one might suspect, large boats and motors are out of place on many north Florida ponds and lakes. Johnboats and canoes with small outboards and electric motors are perfect for fishing virtually all of the area's waters—including some of the big lakes such as Ocean Pond and nearby Palestine Lake. Most north Florida bass lakes are the kind of waters where you'll never see more than just a few other fishermen, nor hear roaring 150-horsepower outboards. Turkeys gobble at dawn from somewhere back in the swamps bordering the little lakes and barred owls hoot at dusk. Huge mossy-back bigmouths haunt the shallows. It's much of what peaceful, Florida-style bass fishing is supposed to be like.

PHOTOGRAPH BY BOB McNALLY

BARN OWLS in the LOFT

PHOTOGRAPH BY LYNN M. STONE

By Jane T. Adams

In April 1987, the Philip and Shirley Turner family was working on their large cattle ranch in eastern DeSoto County, Florida when they became aware of a nesting adult barn owl (*Tyto alba*). For several years, they had enjoyed brief glimpses of a pair of these mysterious birds—initially around an old, hay-filled barn, far from their watchful eyes; but this time in the dark loft of a shed beside the family ranch house.

Knowing I enjoy photographing animals in the wild, Philip Turner invited me to visit the ranch and record the happenings on film. But when I arrived at the nest site, the owls were not there. Turner agreed to keep watch and inform me immediately if the birds were sighted again.

The barn owl is a worldwide species, with many subspecies. Although barn owls may have a very short nesting season elsewhere, they nest throughout the year in Florida. Weather and the availability of food supplies are some of the influences on breeding. They are believed to have monogamous mating habits—as long as each of the pair lives. It was therefore no surprise when, six months later, Turner called to tell me a large, light-colored adult appeared to be nesting again.

On October 27, as I very quietly approached the barn loft, an adult owl quickly flew away. Although it is very difficult to sex adults by their feathering, I believed it was the female. She probably heard me before seeing me because this species has extremely acute hearing. Its external ear flaps, which can be moved to channel sounds to the internal ears, are concealed beneath its facial disc feathers.

The statuesque adult owl watched from a nearby tall pine tree while I climbed a ladder and photographed the nest from a distance. Six white eggs had been laid close to a tar paper roll on the bare wood floor of the loft. Beside the eggs was the furry tail remains of a squirrel which probably had been eaten by the adult bird.

On November 2, six days after the initial photographs were taken, I returned to find the eggs appearing much the same, except they were nestled among additional rodent remains.

On November 7, I approached the loft from a different direction, using extreme caution in an attempt to observe the female on the nest, but, as before, she rapidly swooped away from under the rafters into the surrounding trees. There was one very helpless looking hatchling with the remaining five eggs.

Barn owls, like many other raptors, lay their eggs several days apart but often begin incubation when the first egg is laid. This results in chicks of different ages occupying the nest after hatching. When conditions are favorable, all of the young may survive, but when food is in short supply, the oldest (usually the largest) chick may compete with its siblings for the available food and become the only survivor in the entire brood. Incubation for barn owls ▷

PHOTOGRAPH BY JANE T. ADAMS

Barn owls may lay one to 10 eggs a day or so apart. Because the adults begin incubation at the laying of the first egg, chicks hatch over a period of time. Typical brood size for this species is one to six hatchlings.

takes 29 to 34 days (average 30 to 31 days), and the young normally fly when they are 52 to 56 days old.

Both adults may incubate eggs; however, during my observations of this nest, I observed only one adult. Unless one is incubating (usually the female) while the other is hunting, both sexes are often seen together or not far from each other during courtship and rearing of young. These nocturnal creatures often feed at night, usually venturing out before dark only when hungry nestlings make it necessary.

The barn owl's exceptionally soft, serrated wing feathers make its flight noiseless. One of our most widely distributed birds, it conceals its presence well. The dense, soft plumage makes adults appear much larger than they are. Other identification marks are their heart-shaped facial disc and small eyes—which are well-adapted for hunting prey in poor light. The barn owl has a considerable degree of binocular vision through its forward-facing eyes; however, the eyes are almost immobile. For this reason, a barn owl must turn its head to look sideways. Studies indicate that sight, more than hearing, is most useful for locating and capturing prey.

By November 8, two eggs had hatched. Around the two were more signs of feeding activity—dead mice. Three days later, the third hatchling was visible.

After photographing the three hatchlings, I walked into the wooded area to view the female. She reacted to my intrusion with a sharp squawk and piercing glare in my direction. Unlike the barred owl, which has a deep *whoo-hoo, whoo-hoo, whoo-hooahhh* voice, barn owls scream fretfully, hiss and snap their tongues against their beaks to produce sharp clicking sounds.

The rather slim barn owl has long feathered legs, very long sharp claws and wings which fold beyond the tail. Its white "heart-shaped" face is rimmed with cinnamon-buff feathers which form an elongated facial disk. On the back and upper wings, the cinnamon-buff coloration

The young barn owls molt their down-like feathers twice before acquiring adult feathering.

PHOTOGRAPH BY JANE T. ADAMS

PHOTOGRAPH BY JANE T. ADAMS

Prior to leaving the nest, young owlets may consume large numbers of rodents such as mice and voles, brought to them by the parent birds.

dominates but it is mottled with neutral gray. If the wings are outstretched a white underlining is visible.

On November 16, I found four owlets snuggling very closely together. Several whole, dead rats were in the nest along with the remains of partially eaten ones.

By November 25, five of the six eggs had hatched. The huddled youngsters emitted hissing sounds in reaction to my presence. The eerie hissing sounded similar to the rattling of a rattlesnake. Perhaps that is why the barn owl is sometimes called "the snake owl."

On November 29, when I saw the young downy owls, I was confident they were doing well. Rapid growth was obvious and only one of the six eggs, which by then was out of the nest, had failed to hatch.

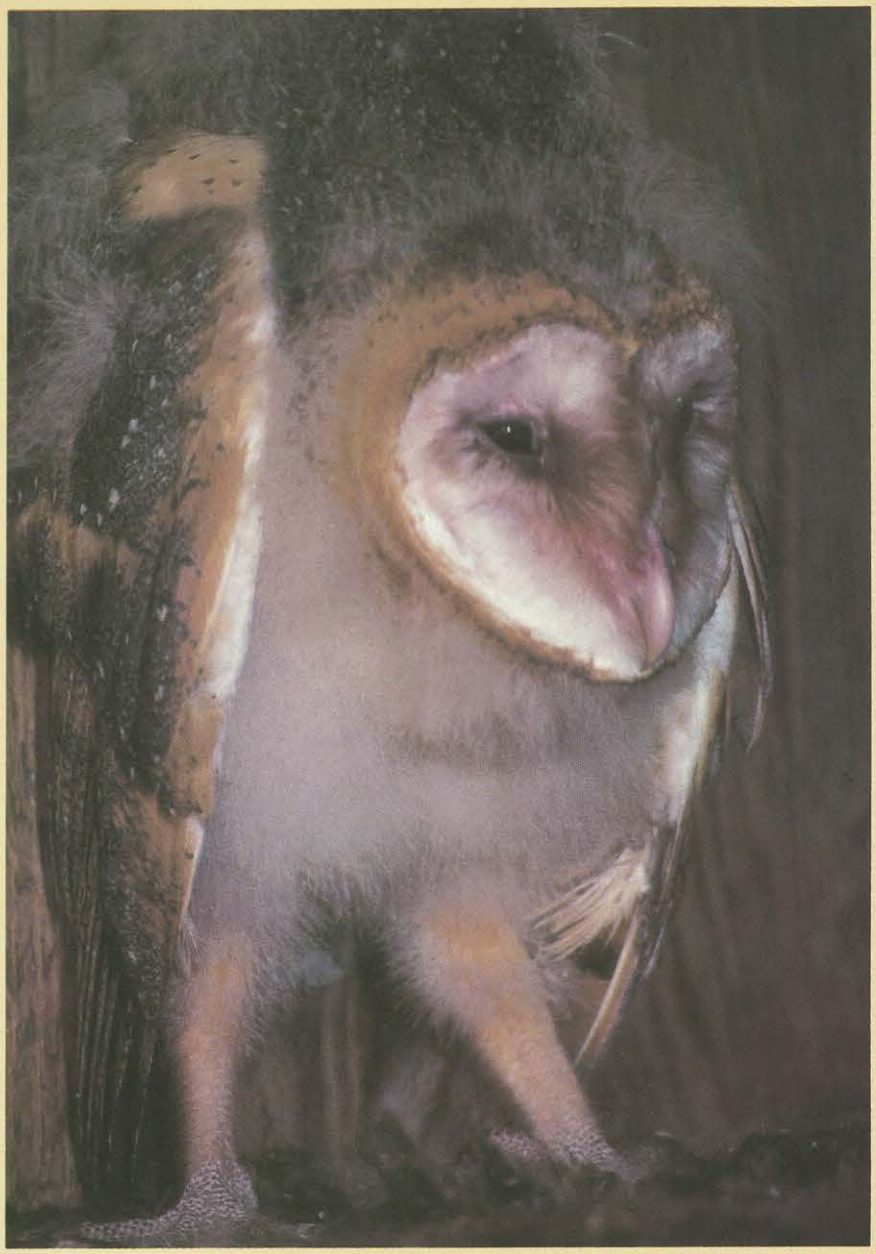
By December 8, I decided these juvenile birds would never win a beauty contest. The young are white in their first downy stage, have elongated beaks, small heads, long awkward legs and large talons which make them a very unique sight.

On December 15 I noticed how inquisitive the youngsters were. Their beady eyes curiously peered at me as the camera shutter clicked, and while I watched, they also grabbed at disgorged pellets with their sharp talons. Hasty feeders, barn owls swallow the fur, feathers, bones, beaks and claws of their prey. Instead of expelling this hard dross with other waste material, owls separate the digestible portions in the gizzard, then expel the indigestible matter—formed in variously sized pellets—through the gullet and mouth.

I thought it fortunate for farmers that the barn owl helps control rodent populations—especially mice and rats. Farmers who are familiar with the eating habits of this bird realize what good friends they have because rodents can be detrimental to efficient crop production. One study of the barn owl's eating preferences, made by collecting and analyzing their digestive pellets, showed that 96 percent of their food consisted of small rodents. ▷

Nestling barn owls grow rapidly in size if food supplies are adequate; but if food is scarce, smaller hatchlings may not survive. Sometimes, only a single chick survives.

PHOTOGRAPH BY JANE T. ADAMS



PHOTOGRAPH BY JANE T. ADAMS

This juvenile barn owl has almost lost its second down and grown its adult plumage. Typically, it will test its wings by much flapping before taking its first flight. Serrated edges on the primary wing feathers make their flight noiseless in the air.

When I arrived on December 17, I found one young owl was out of the nest, only 40 days after the initial hatching. Since Florida's barn owls are frequently nonmigratory and generally tend to stay within a given territory, I reasoned I might see the youngster again. By December 30, another juvenile had taken flight.

As I observed the changes in their plumage from the hatchling down to subadult feathering, it was becoming more obvious to me why this bird of prey is also often called the "monkey-faced owl" and the "white owl." As the juveniles matured, and as their natal down was replaced by feathers, they grew more beautiful. It was also amusing to watch the young birds as they exhibited one of their habits—lowering their heads and swaying them from side to side.

On the morning of January 1, the third barn owl left the nest. Turner's son, John, saw it on the ground beside a wood pile at 7:30 a.m. When he approached, the bird became very defensive, ruffled its feathers and hissed at him. The young owl was able to fly only very short distances, but later the same day, the little owl was gone from sight. I surmised one of the adults may have led it to safety.

John, who had also observed the owls' behavior closely, noted that the female was initially very attentive to her brood both day and night. However, about the middle of December—as the young were maturing—he did not see her forage in the daylight hours. He also noted that during the course of the juveniles' development in the dark loft, several varieties of snakes as well as squirrels, rats and other rodents were delivered to the nest.

When I returned on January 6, one lonely owlet remained. For 10 days the last nestling stayed alone except for feeding visits.

On January 9, one of the adventurous young owls flew to the ranch house roof then fell down the fireplace chimney. Being very disoriented, it knocked over lamps inside the house and caused quite a disturbance before being carefully guided out the door with a broom.

On that same night, Mrs. Turner saw several barn owls congregated in the oak trees near the loft area. She went outside and watched them as they batted their wings together and made shrieking noises.

On January 16, I took my final pictures. The next day, the nest was empty. What an exciting three months of adventure the barn owls had given me! Now, whenever I see one of these elegant nocturnal creatures perched on a tree or soaring through the countryside, I will more fully appreciate the species' beauty and worthwhile contribution to humankind.

Hunting Bobs in the Bush

By Paul M. Allen

Quail hunting opportunities have changed in Florida during recent years. With conversion of prime bobwhite habitat to other land uses, and more and more places being closed to hunting, just finding a field in which to hunt these speedy little birds is becoming more difficult. And, it seems to me, quail are harder to hunt than they once were. I used to see many coveys that would flush, then fly down into the same field. Nowadays, I rarely see more than one covey a season that will pop into open broomsedge where the shooting can be clean. They seem to fly for the nearest stand of timber or a big palmetto patch and settle in the cover, making it more challenging than ever to hunt them.

Florida's open hunting season for quail is a long one—starting this year on November 14, 1987 and running through March 6, 1988—with a bag limit of 12 per day. I go for quail anytime I can, but I find the best bobwhite hunting in our Southern climes occurs toward the latter part of the season—especially during late-January through February.

The covey you run into around Thanksgiving is apt to be a group of a dozen birds or so, and most of them will be young birds hatched in the previous spring or early summer. The bobwhite has a lot of natural enemies—especially a few which prey on their nests—and slow or weak birds rarely survive through the end of fall. Whether it is hunted or not, most of the year's hatch does not survive through winter. If you stay afield through the season, however, and keep track of the birds' changing habits, you can get all the late season shooting you want.

From a usual peak of grown and nearly grown birds around September, the population starts to decrease. Birds that are the fittest—and perhaps luckiest—are most likely to survive until later in the season. Slow-flying birds will more likely be knocked down in November, but the faster, more zig-zagging birds are the ones that make it into February. I guarantee if you take 10 to 12 birds on a day in February you will have paid your dues for them.

PHOTOGRAPH BY FGFWFC

Hunting pressure seems to hit a high during winter holidays, then it thins out somewhat by the third week in January. The coveys are usually more settled by that time of the year, and vegetation has been thinned somewhat by winter. "Ol' Bob" is tough and very tricky by February, and more apt to stay close to or be within thick cover, making shots at singles tough slugging.

Three years ago, I went to some good hunting country in Hernando County, to try and shoot a quail on a frosty February morning. My hunting partner and cohort that day was Mitch Clark, a top gun when it comes to knocking down the little brown bombers. Mitch had his two well trained pointers along, both of which had been scraped from nose to tail during previous hunting in palmetto thickets and briars.

Mitch and I prowled several fields before the dogs hung up on the first covey. As the birds exploded out of the field and rocketed toward a heavy stand of pines and brush, I swung on the lead bird, knocked it down then missed the next shot. I asked Mitch how he made out and he answered, "Got one, of course!"

After the dogs found our birds, Mitch said, "Lets go. There's no use in trying to nail a single in that brush. Let's go hunt another covey somewhere else."

The air was getting warmer and the sun was breaking through pretty good. In another 30 minutes the two pointers locked on another covey in the edge of a palmetto patch. As the birds hurtled out of the cover, I shot twice but only dropped one bird. Mitch yelled, "Got two down!

"Did you see those birds?" Mitch asked. "They acted like they were gonna set down but then they flew a hundred yards into the swamp. Let's hunt the field on the other side."

Ten minutes later, the dogs hit another covey at the edge of the adjacent field and Mitch and I downed two more birds each before the rest of the covey zipped into heavy brush. By 1:30 p.m., Mitch and I had 10 birds apiece. We had to hunt for those February birds, but they were there.

I find the most common mistake quail hunters make is to hunt the areas where they would like to find birds, but not where the birds really are. Late in the season, you won't find quail very far out in open fields. And when you run into them in the woods, they'll often be in heavy briars, grapevine growth or other entanglements.

Hunting with Mitch last season, I noted he drove past a considerable amount of good-looking quail territory. I figured some of the open woodlands we passed would hold some birds and I mentioned that to him.

"Yeah," he said. "We might find one covey in all that by covering 500 acres, but I'm headin' for an old grown-up farm on the other side of Brooksville. It has plenty of ragweed seeds in the fields."

A few minutes later, we turned down a dirt road back through the woods to an old abandoned field where he had obtained the owner's permission for us to hunt. Climbing into the back end of the pick-up for a minute, we looked over the field and old farm surroundings.

The field was full of dead ragweed, bordered by broomsedge. On one side was a stand of pines and the other side had a thick live oak hammock close to it. There was a slight breeze and it was a little damp from a rain shower the night before.

"There should be two or three coveys of birds out there," Mitch said confidently. "When I put the dogs out, they'll hunt out the edges. If the birds have moved much, the dogs will pick up their scent.

"If they circle the field and nothing happens, it'll mean the birds are in the brush and woods. If they are, we'll just have to check out the brush and thick stuff. If the dogs don't pick 'em up, we'll get out of here and head for another place."

We loaded our guns and Mitch turned the pointers loose. They ran straight for the edge of the field then began to zig-zag in and out along the edges. We headed down the edges behind the dogs. Suddenly, the dogs headed straight down one edge, the lead pointer skidded to a screeching point and the second froze beside him, honoring the point. We plowed on in and flushed the covey of bobs.

The birds came barreling out through the tops of some tree limbs and stayed low. Mitch's gun boomed twice. I got one shot at a last-minute single and downed it. The dogs brought in Mitch's two birds.

"This goes to show you," Mitch said. "You should have gotten off another shot. Remember, *you have to hunt the birds where they are, not where you'd like to find 'em.*"

The singles went back down a ditch along the edge, so we decided to let them settle while we hunted the other end of the field for another covey.

We went through the same set of circumstances there—the bird dogs running the edges with Mitch and I behind them. In the corner at the end of the field was a wild persimmon stand with a thicket around it. Both dogs came to point there.

We didn't slip into the covey. Instead, we walked in as if we were going to walk right over them. Sure enough, the birds slammed out through the trees, but every time I started to pull, a bird disappeared on me. I finally got off a shot at the last bird just as it disappeared. I shot the top out of a tree in the process, but amazingly, the bird came down.

"There you go!" Mitch hollered. "You shot him where he was."

I fetched the bird while the dogs brought in one Mitch had taken. "Just in case there's another covey here," he said as we continued the hunt, "I'll send the dogs down the east side."

We watched the pointers as they swept the edge of the field back toward the pick-up. They didn't cut any scent and when they reached the end, Mitch signaled them back.

"Let's see if we can dig out the singles from the first bunch," he suggested.

As we worked back to the area where we had marked the singles down, he turned the dogs loose. The quail were giving off some good scent and the dogs quickly began to pick up the birds. They were in thick live oak scrub that was so

PHOTOGRAPH BY FGFWFC

PHOTOGRAPH BY FGFWFC

Late-season bobwhites may spend more time in heavy cover than they do earlier in the season. It takes quick, accurate gunning to bag them.

thick the limbs were slapping the daylights out of me. Every time a bird whirred out of the mess, I got slapped by a limb as I threw the gun to my shoulder. I missed three straight.

Mitch yelled, "Pretend like you're in an open field with no trees!" That helped me take two straight.

Moving to where the second covey's singles had settled in, I took several shots but none were in the open. The bobs used the cover just like a Northern grouse—darting in and out of it like little brown bullets.

When we got back to the truck, I had 10 birds and Mitch had his 12 for the day. I learned something on that hunt. Besides knowing the terrain and cover, you have to be a "positive shooter," believing that you are going to hit the target.

Since that day, I have hunted with Ken Butler, another top-notch quail hunter. He agrees that late-season shooting is certainly the most challenging and rewarding. He says, "There can be plenty of birds toward the end of the season, but tney really make use of heavy cover."

In late-season, birds may radically change their feeding habits. Instead of taking their time and loafing along to a feeding area, as they normally do in the early part of the season, they fly into their feeding areas, feed in a rush, then fly right out again.

Also, instead of feeding early and late as they do at the onset of the season, they may feed during the middle of the day.

You must hunt quail under the conditions of the field and time of season. We found that bobwhites which made it through February preferred the best cover and stayed close to it.

On another recent hunt with Mitch, we rambled up to a thick piece of jungle near Rainbow River, close to Dunnellon. This perfect quail field was full of 10-foot-high dead weeds well mixed with vines and briars.

I was thinking the dogs never would get inside that morass—much less us—when suddenly, we had two coveys of birds running and scrambling around. They would not leave the thick area and I found myself shooting at fleeting, flying shadows while Mitch was blasting away about a 150 yards from me.

We fought the place for two hours, shooting at whizzing ghosts while every once in a while we occasionally spotted a dog. By lunch time, I had three birds and Mitch had three. I figured I had personally shot the tops out of two acres of brush.

That afternoon, we went hunting in another place—this one composed of good, open piney-woods, where the little birds flushed into "good" thickets. In an hour or so, Mitch and I limited out for the day.

Although Florida's bobwhites are small game birds, hunting them is big on excitement. The challenge of finding them and going after them is one I look forward to each year.

Hunter Education News

Compiled By Captain Ed Tyer

Hunter Education Coordinator

1986-87 HUNTING ACCIDENTS

The number of hunting related accidents in Florida during 1986-87 was lower than for the previous year, falling from 30 to 26. And, where six were fatal last year, only three were this year. Although the news of any accident is unpleasant, we have summarized the most recent accidents here for your study, hoping that you will be more conscious of safety afield—for yourself and others.

Half the accidents involved a shotgun and a quarter involved a rifle. Only one bow hunting accident was reported. About 60% of the time, the game being sought was deer—not surprising given the fact that deer hunting is so popular in Florida. About one-fourth of the time, the muzzle was within one yard when the gun fired, and eight of the 26 shootings were self-inflicted.

Only one of the victims was wearing blaze orange when he was shot and that accident involved one hunter falling with his gun and shooting the other, who was close to and facing him. Mistaking a person for game was a factor in 20 percent of the accidents, and shooting at—but missing—game was the case in another 20 percent. The most common element in the 26 accidents was simply careless handling of firearms, a factor in 40 percent of the accidents. Carrying a loaded gun in a vehicle, careless loading and allowing a gun to drop or fall were common causes.

NORTHWEST REGION

Day/Date	Time	Age of Shooter	Firearm	Distance	Game Sought	County	Circumstances
Saturday 10/04/86	1:00 p.m.	30	Shotgun	21 to 50 yards	Dove	Santa Rosa	The shooter shot at a dove and struck the victim. Not fatal.
Sunday 11/16/86	6:50 a.m.	30	Rifle	101 yards	Deer	Walton	The shooter mistook the victim for a deer. Not fatal.
Thursday 11/27/86	2:00 p.m.	14	Shotgun	6 to 10 yards	Deer	Madison	The shooter fell with his loaded gun, it discharged and struck the victim in the back. Not fatal.
Thursday 11/27/86	10:30 a.m.	—	Shotgun	101 yards	Deer	Walton	Three hunters shot at the same deer with shotguns. The victim (one of the three) was beyond the deer and was struck by one pellet in the leg. Not fatal.
Friday 11/28/86	1:00 p.m.	33	Shotgun	2 to 5 yards	Deer	Santa Rosa	The shooter was walking toward the victim when he fell. His shotgun discharged and hit the victim in the arm. Not fatal.
Monday 12/01/86	5:08 p.m.	—	Rifle	Unknown	Unknown	Escambia	The victim was wounded in his side by an unknown shooter. Not fatal.
Saturday 12/13/86	5:00 p.m.	29	Rifle	101 yards	Deer	Holmes	The victim's white collar was mistaken for a deer's rump. The victim was shot in the arm and side. Not fatal.
Saturday 12/20/86	3:30 p.m.	26	Shotgun	51 to 100 yards	Deer	Santa Rosa	The victim and the shooter both shot at a deer that ran between them. The victim was hit in the neck. Initially, the victim and the shooter did not see each other. Not fatal.
Wednesday 12/24/86	10:00 a.m.	20	Shotgun	51 to 100 yards	Deer	Gulf	The victim and the shooter both shot at a deer that ran between them. The victim was hit in the abdomen. Initially, they did not see each other. Not fatal.
Friday 01/09/87	11:00 a.m.	35	Shotgun	101 yards	Deer	Santa Rosa	The victim, a three-year-old, was playing in a ditch next to where his father was hunting from a truck. When a deer ran across the road, the father shot and accidentally hit the child in the head. Not fatal, but the child was blinded.
Saturday 01/17/87	8:30 a.m.	—	Muzzleloader	Less than 1 yard	Deer	Escambia	When his tree stand slipped, the hunter dropped his gun. It hit the ground, discharged and fired a slug into his elbow. Not fatal.

Saturday 02/08/87	8:15 a.m.	—	Muzzleloader	Unknown	Deer	Okaloosa	The victim was shot with his own gun when it fell as he was exiting his truck. Not fatal.

NORTHEAST REGION

Thursday 10/16/86	7:30 p.m.	—	Handgun	Less than 1 yard	Deer/Hog	Levy	The victim was archery hunting, and had a .22 revolver in his pocket. As he was climbing a ladder stand, the revolver fell from his pocket and discharged. A bullet struck him in the stomach. Not fatal.
Sunday 11/23/86	11:00 a.m.	—	Rifle	Less than 1 yard	Unknown	Bradford	The victim was shot in the chest with his own rifle. Details are unknown. Fatal.

CENTRAL REGION

Sunday 10/26/86	4:00 p.m.	—	Shotgun	Less than 1 yard	Dove	Lake	The victim slipped, his gun hit on its hammer and fired. Pellets hit the victim in the head. Not fatal.
Saturday 11/15/86	7:50 a.m.	25	Rifle	101 yards	Deer	Putnam	The victim was mistaken by the shooter for a deer. Fatal.
Wednesday 11/19/86	9:25 a.m.	—	Handgun	Less than 1 yard	Unknown	Sumter	The victim was loading his revolver when his thumb slipped from the hammer and caused the gun to discharge. He was shot in the leg with "snake shot." Not fatal.
Friday 11/21/86	11:00 a.m.	—	Rifle	Unknown	Unknown	Putnam	The victim was shot in the leg by an unknown shooter when a deer ran across the road near him. Not fatal.
Thursday 11/27/86	7:30 a.m.	17	Shotgun	21 to 50 yards	Turkey	Volusia	The victim was shot in the legs as he sat by a tree calling turkeys. Not fatal.
Wednesday 12/03/86	5:00 p.m.	—	Shotgun	Less than 1 yard	Deer	Marion	The victim was shot with his own gun while he was removing it from a gun rack. Not fatal.
Sunday 04/05/87	8:00 a.m.	—	Shotgun	6 to 10 yards	Turkey	Sumter	The victim was calling turkeys when he was shot in the head and neck by an unknown shooter. Not fatal.

SOUTH REGION

Sunday 12/07/86	4:30 p.m.	20	Rifle	6 to 10 yards	Rabbit	Charlotte	The victim ran in front of the shooter and was shot in the leg. Not fatal.
Sunday 05/31/87	3:20	18	Shotgun	Unknown	Raccoon	Pasco	The shooter heard a noise and thought it was a raccoon. He shot into the bushes and hit the victim in the back of the head. Fatal.

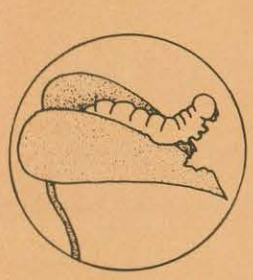
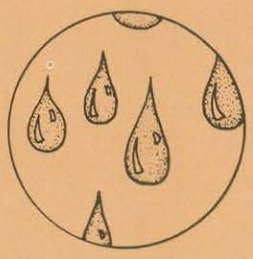
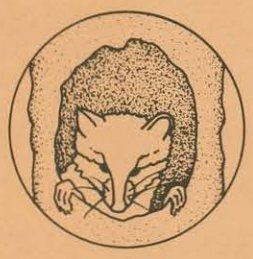
EVERGLADES REGION

Saturday 09/13/86	6:00 p.m.	—	Bow	Tree height	Deer	Palm Beach	The victim threw his bow and arrows from a tree in which he was hunting, then jumped from tree and landed on an arrow. Not fatal.
Saturday 10/04/86	6:59 p.m.	—	Shotgun	2 to 5 yards	Dove	Palm Beach	The victim was shot when his hunting partner picked up a shotgun from the tailgate of a truck. Not fatal.
Saturday 10/04/86	10:15 a.m.	—	Muzzleloader	Less than 1 yard	Deer	Broward	The victim placed his muzzleloader in the cab of a truck with the muzzle pointing up. He was riding on top of the cab when the driver hit a bump in the road and the gun discharged and hit the victim in the leg. Not fatal.

The Emerging Naturalist

By Judy Gillan and Swannee Nardandrea

RECIPE FOR A HEALTHY HABITAT

FOOD + WATER + SHELTER + SPACE

All animals, including humans, share the same basic life needs. For their survival, animals need healthy habitat that contains just the right arrangement of food, water, shelter and living space.

Color
Me
Critter

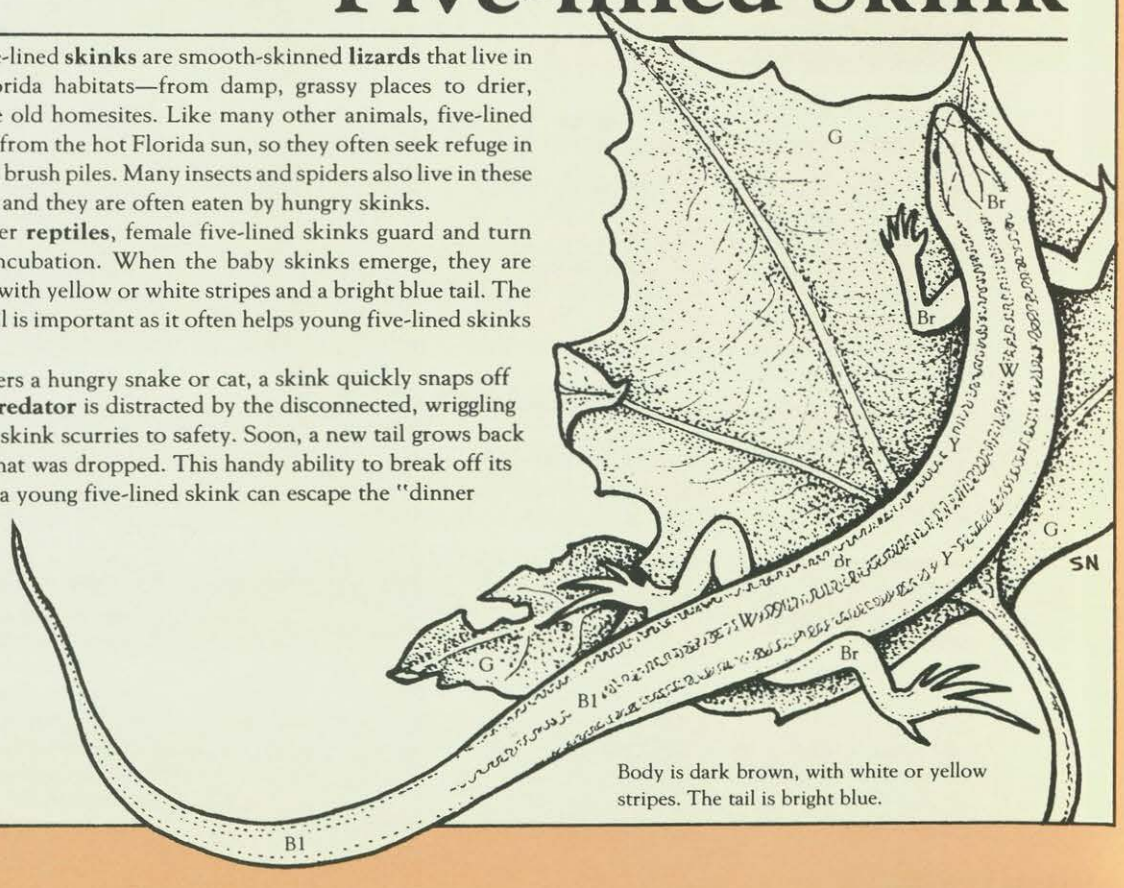
Five-lined Skink

Southeastern five-lined **skinks** are smooth-skinned **lizards** that live in many different Florida habitats—from damp, grassy places to drier, disturbed areas like old homesites. Like many other animals, five-lined skinks need shelter from the hot Florida sun, so they often seek refuge in shady places such as brush piles. Many insects and spiders also live in these shady hiding places and they are often eaten by hungry skinks.

Unlike most other **reptiles**, female five-lined skinks guard and turn their eggs during incubation. When the baby skinks emerge, they are beautifully colored with yellow or white stripes and a bright blue tail. The shiny bright blue tail is important as it often helps young five-lined skinks escape danger.

When it encounters a hungry snake or cat, a skink quickly snaps off its tail. While the **predator** is distracted by the disconnected, wriggling blue tail, the young skink scurries to safety. Soon, a new tail grows back to replace the one that was dropped. This handy ability to break off its own tail is one way a young five-lined skink can escape the "dinner menu" of its many predators.

Br = Brown
W = White
Bl = Blue
G = Green
Y = Yellow



Body is dark brown, with white or yellow stripes. The tail is bright blue.

BEAR IN MIND

In Florida, growing cities have resulted in the altering of many natural areas and wildlife habitats. Much land has been cleared for houses, offices, shopping centers, schools and other uses to serve the needs of Florida's residents and visitors. Nearly 12 million people live in the state today and about 1,000 new people arrive daily.

There is no replacement for good, healthy wildlife habitat; but, understanding how animals meet their needs in nature shows us how to lessen their habitat losses by providing them with food, water, shelter and space in our yards and gardens.

Food—The ideal yard provides as much vegetation as possible to meet the year-round needs of many different species. Good wildlife food plants include shrubs and trees that produce acorns and nuts, and other plants that produce seeds, berries and fruits. Nectar from flowers is also food for some animals.

Water—Animals need water for drinking and bathing. A shallow dish can provide it for many small animals, especially if it is placed near shrubs or other cover plants. Fresh water should be available year-round.

Shelter—Animals need protection from adverse weather and their predators. Sometimes, food plants also serve as shelter. Brush piles, hedgerows, tall grasses, hollow logs and shallow pools are examples of the kinds of shelter that can protect animals from wind, rain, hot sunshine and predators.

Space—A complete wildlife habitat must provide enough space, cover and security for nesting and raising young. The best reproductive areas are those that are well hidden or inaccessible to predators. The dark safety of a brush pile can provide a female rabbit with a safe place to bear and raise young.

lizard a scaly reptile that has ears, eyelids and (usually) four legs which each have five clawed toes.

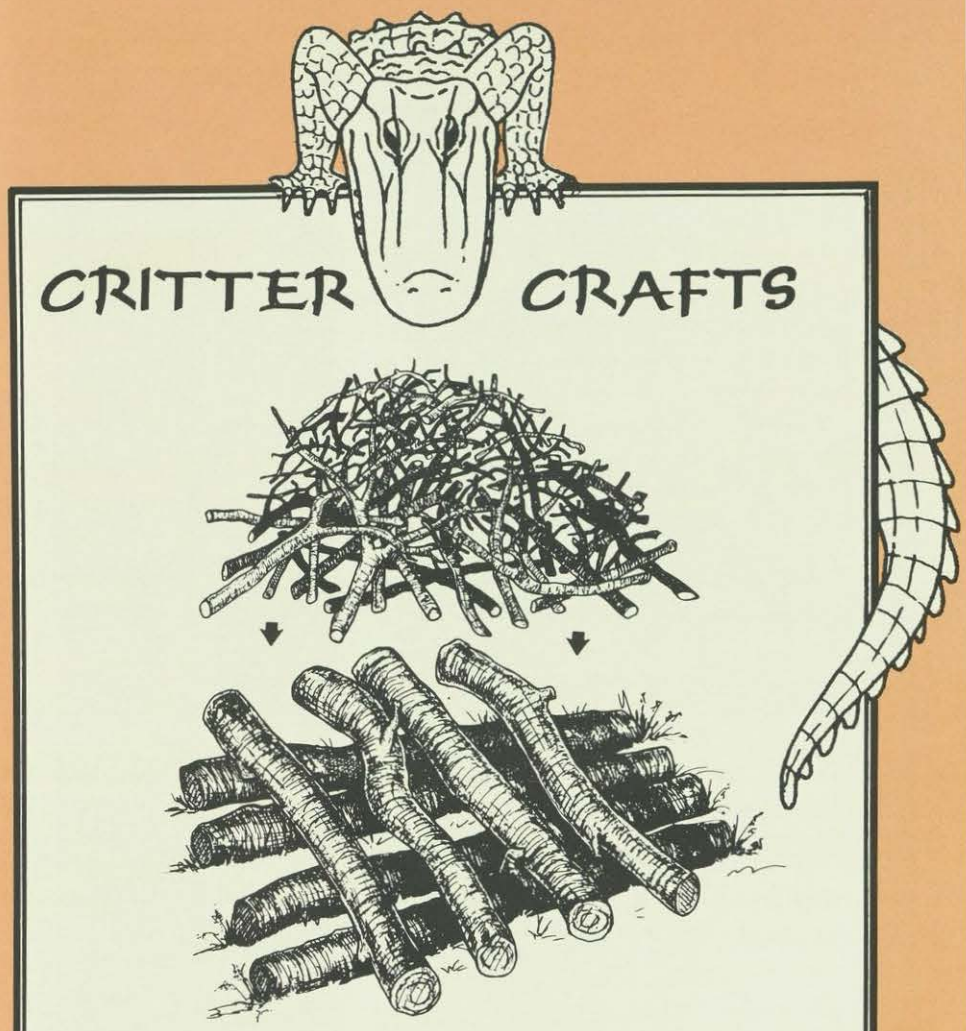
habitat the natural place where a plant or animal lives.

predator an animal that eats other animals.

reptile a class of animals that includes turtles, lizards and snakes. Snakes and lizards are covered with a scaly skin and are cold-blooded, which means their body temperature closely matches that of the surrounding atmosphere.

skink a ground-dwelling lizard with smooth, polished-looking, flat scales and short (but fast-moving) legs.

Build a Backyard Brush Pile



Brush piles are fun and easy to build! A pile of tree limbs and logs can attract some of your favorite animals to your yard. Birds, small mammals, reptiles and amphibians have the same basic needs for food, water, shelter and space. A simple brush pile can provide some of these needs, as well as resting places.

Although most loose piles of limbs and branches will make a fine brush pile, it is best to build a more permanent one that will not settle down over time. With the help of your parents or friends, you can build your own brush pile. You may want to wear protective clothing while constructing it.

Start by building a base of eight logs (about six feet long and four to six inches in diameter). Lay four of them on the ground parallel to one another, eight inches to a foot apart. Next, lay the other four logs on top and perpendicular to the first ones. You can also use clusters of rocks or concrete blocks to build the base.

After the base is in place, cover it with brushy tree limbs. Use the larger ones first, then add smaller and smaller ones until you have a pile about four to six feet in height and diameter. You can then continue to add sticks, branches and leaf litter to the top as the pile rots down in order to continue providing shelter and attracting an abundance of foods such as earthworms.

Caution: Watch out for stinging insects and venomous snakes around your brush pile.

Note to Parents: Check your local ordinances to be sure there are no prohibitions against maintaining a brush pile in your yard.

For more information and a free copy of *Planting a Refuge for Wildlife*, write to: Nongame Wildlife Section; Florida Game and Fresh Water Fish Commission; 620 South Meridian Street; Tallahassee, FL 32399-1600.

Conservation Update

Compiled By John Waters Jr.

Assistant Editor Post Changes This Issue

Paige Moody, FLORIDA WILDLIFE's assistant editor since the September-October 1986 issue, resigned from the Commission October 30 to return to her native Georgia.

Moody, a talented and very capable staff member, was also responsible for coordinating the production and printing of brochures, reports and other publications projects of the Commission, and for overseeing the magazine's circulation operations.

Andrea H. Blount has been named as Moody's successor and she joined the staff November 2. She came here from the International Association of Hospitality Accountants, where she was publications director and editor of the association's technical journal. Mrs. Blount also has shared her journalistic observations of Florida's rich natural history and traditional crafts in several Florida newspapers and magazines.

She recently moved to Tallahassee from Keystone Heights with her husband, Rob Blount, who has been appointed director of the Florida Agricultural Museum.

*****

Florida's Prehistoric Canoes Disappearing

More wooden dugout canoes have been found in Florida than anywhere else in the world, says University of Florida anthropology professor Barbara Purdy. "We know the location of more than 200," she explains, "and many of them are literally turning into sawdust."

Once removed from the water or soil that previously contained them, these ancient crafts begin to break apart and literally decompose when exposed to the atmosphere.

Some of the canoes which have been found in Florida's lakes, swamps and other environments have been dated to more than 2,000 years old. The oldest ones found have been about 15 feet long and 16 inches wide and were made of yellow pine. More recent canoes that have been studied show the same construction techniques, but were longer—from 18 to 30 feet. Some of these were made of cypress. Fire and stone tools were used to hollow out and shape them.

Purdy is leading a program to sketch, photograph and otherwise catalogue the state's prehistoric canoes—undisturbed in their current locations—as part of a project to gather information about them while they still exist. Many are disappearing due to collecting and other factors such as development of areas where the old canoes lie.

*****

Some Federal Refuges Now Charge Entry Fee

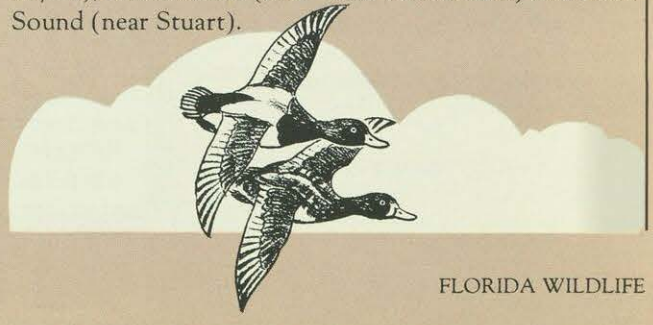
Costs for maintaining existing refuges for migratory waterfowl, acquiring new wetlands for waterfowl and providing public access privileges have risen substantially in recent years. To offset these costs, some federal refuges have recently been authorized to charge a daily entry fee to visitors.

The Emergency Wetlands Resources Act of 1986 authorized the entry fees, which will vary from $2 to $5 daily, depending on the refuge. Congress provided that 30 percent of the fees are to be used for refuge operation and management and the remaining 70 percent is to be deposited in the U.S. Fish and Wildlife Service's Migratory Bird Conservation Account. This fund is specifically for acquisition of wetlands for the benefit of migratory birds.

Those who possess a current federal Migratory Bird Hunting and Conservation Stamp ("Duck Stamp"), Golden Eagle Passport (available for $25 annually) or life-time Golden Access Passport (free to those at least 62 years of age and to disabled persons) will be admitted without paying an extra entry fee. A federal Duck Stamp or passport will allow one vehicle and its occupants to enter.

The federal Duck Stamp costs $10 and can be purchased at U.S. Postal Service offices and at some federal refuges. The current stamp, which features redhead ducks, is good until June 30, 1988. Golden Eagle and Golden Access passports can be purchased at many refuges and at most national park and national forest headquarters.

Florida's national wildlife refuges which currently charge admission and accept the Duck Stamp, Golden Eagle Passport or Golden Access Passport are St. Marks (near Tallahassee), J.N. "Ding" Darling (near Ft. Myers), Loxahatchee (near West Palm Beach) and Hobe Sound (near Stuart).



Litter Poses Distinct Hazards to Wild Animals

Along with increased numbers of people sharing America's rich store of outdoor resources, more and more cases of wildlife injury and death are being caused by greater volumes of litter. Plastic wraps placed around canned beverage packs, for example, have become a particularly injurious item in the environment. Fish sometimes become entangled in them, animals may die from eating them and birds can be snared and strangled. Because of the strength of the plastic used to manufacture these packages, they last a long time in the environment—and some are virtually non-biodegradable.

Glass bottles and jars carelessly discarded along roadsides often become unescapable traps for small terrestrial creatures such as shrews and mice. When thrown into the water, aquatic organisms are sometimes trapped and die.

*****

Nature Notes

Melted Snow *provides three-fourths of the American West's water for drinking, irrigating crops and generating electricity.*

62 Million Americans *maintain bird feeders in their yards. They dispense an estimated 1.2 million tons of bird seed annually.*

836 Bird Species *are considered by experts to occur in North America. Some of these are very rare and seldom seen by humans.*

More Than One-Third *of the underground storage tanks for toxic materials in the United States are estimated to be leaking their contents into the groundwater system.*

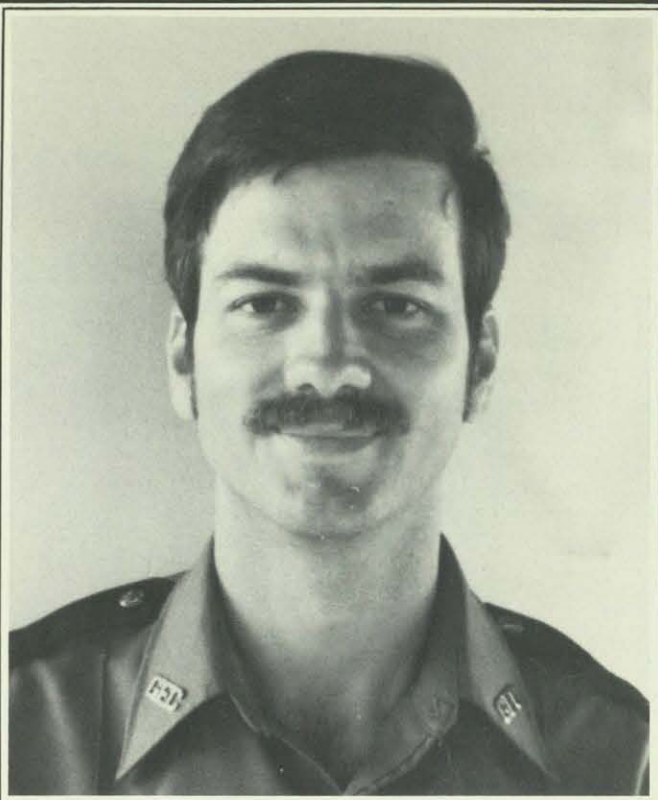
Pine Trees in the South *showed 30 percent less growth from 1972 to 1982 compared to the previous decade. Air pollution is suspected as a major cause.*

Southern Bald Eagles *sometimes feed among vultures, sharing the same carrion. Eagles have also been known to incorporate litter such as cans and bottles into their nests.*

Giant Marine Clams *may live for two centuries, and weigh several hundred pounds.*

Black-tailed Jack Rabbits*, a true hare occurring naturally in the western United States, are found—although rarely—around fields in Dade County, Florida.*

The Bobcat and the Panther *are Florida's only native living members of the wild cats family; however, fossils of other species—including the saber-toothed tiger and the jaguarondi—have been found. The jaguarondi now occurs here as an introduced exotic.*



Wildlife Officer Ray Lynn Barnes

He Loved Wildlife and Wilderness

Wildlife Officer Ray Lynn Barnes died in the line of duty November 21, 1987. He spent the last four years of his life protecting the northwest Florida wildlife that enriched his youth. The days he spent hunting with his father, in the Crestview vicinity, had generated a love for wild creatures and the wilderness where they live.

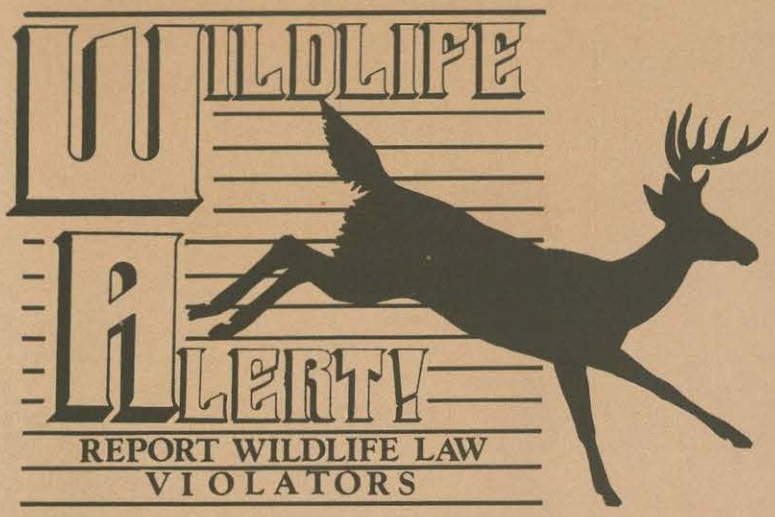
At age 17, while still a student at Laurel Hill High School in Crestview, Barnes decided he would become a wildlife officer. His wife, Judy, recalls that he never considered any other kind of work. Even before he became a wildlife officer in October 1983, he assisted the Game and Fresh Water Fish Commission's efforts by volunteering as an unpaid wildlife reservist.

By 1987, Officer Barnes had earned the distinction of being one of five statewide nominees to be honored as Wildlife Officer of the Year.

Although he loved the thrill of turkey hunting more than any other outdoor recreation, he was also a man with a quiet side. He spent many hours writing prose about the things he had seen in the wild and the things he felt. He particularly liked to compose prayers.

Barnes' many friends have established a memorial fund to assist Mrs. Barnes and the couple's two daughters, Keisha, 10, and Crystal, 7. Contributions may be sent to: Lynn Haven Commercial Bank, Post Office Box 100, Lynn Haven, FL 32444.

— Henry Cabbage



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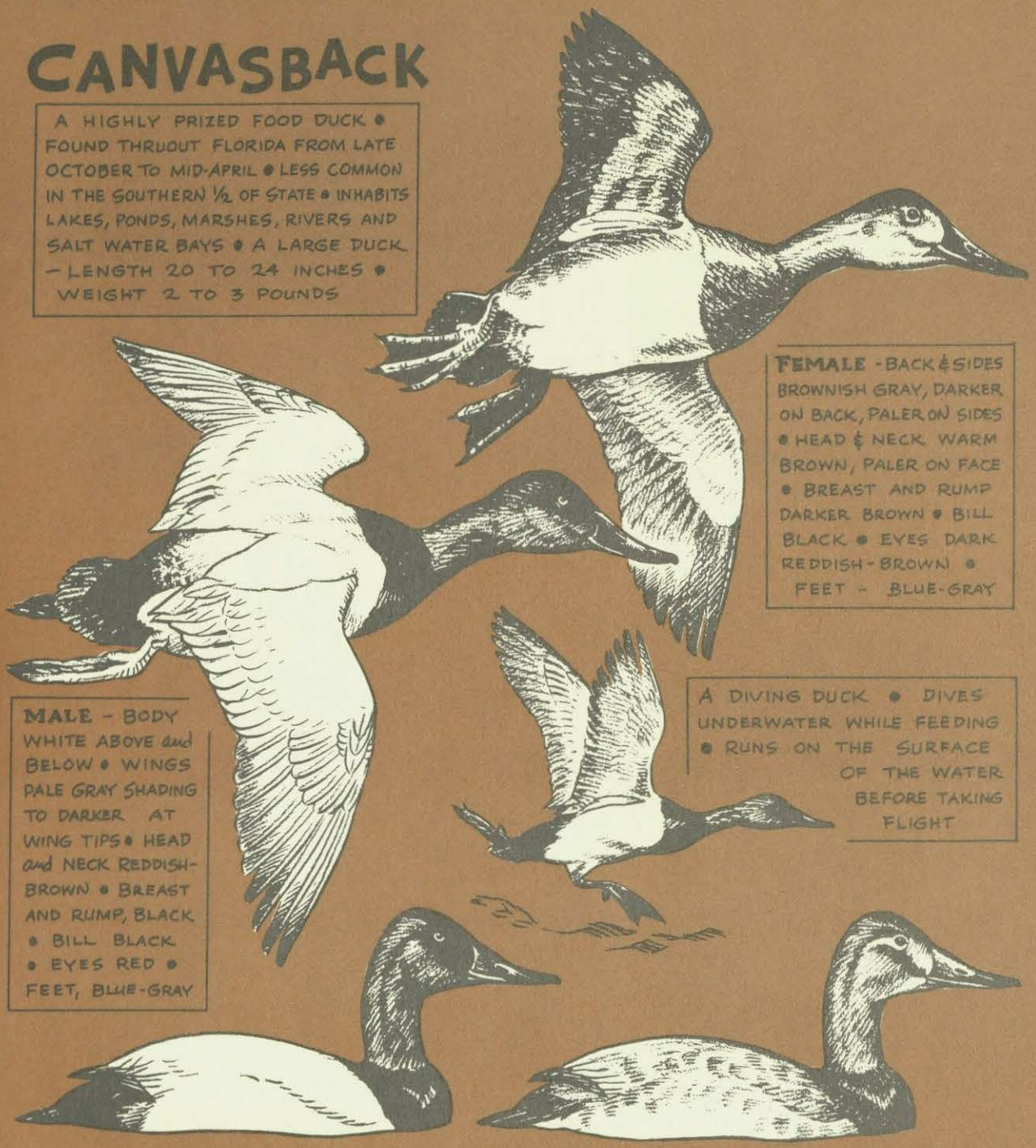
CANVASBACK

A HIGHLY PRIZED FOOD DUCK • FOUND THRUOUT FLORIDA FROM LATE OCTOBER TO MID-APRIL • LESS COMMON IN THE SOUTHERN ½ OF STATE • INHABITS LAKES, PONDS, MARSHES, RIVERS AND SALT WATER BAYS • A LARGE DUCK – LENGTH 20 TO 24 INCHES • WEIGHT 2 TO 3 POUNDS



FEMALE - BACK & SIDES BROWNISH GRAY, DARKER ON BACK, PALER ON SIDES • HEAD & NECK WARM BROWN, PALER ON FACE • BREAST AND RUMP DARKER BROWN • BILL BLACK • EYES DARK REDDISH-BROWN • FEET - BLUE-GRAY

MALE - BODY WHITE ABOVE and BELOW • WINGS PALE GRAY SHADING TO DARKER AT WING TIPS • HEAD and NECK REDDISH-BROWN • BREAST AND RUMP, BLACK • BILL BLACK • EYES RED • FEET, BLUE-GRAY

A DIVING DUCK • DIVES UNDERWATER WHILE FEEDING • RUNS ON THE SURFACE OF THE WATER BEFORE TAKING FLIGHT

MALE FEMALE

BOTH MALE AND FEMALE HAVE DISTINCTIVE *LONG, SLOPING HEAD PROFILE* (UNLIKE ANY OTHER DUCK)

FLORIDA WILDLIFE MAGAZINE • FLORIDA GAME AND FRESH WATER FISH COMMISSION

From the December 1967 issue FLORIDA WILDLIFE.

NOTICE: Canvasback ducks cannot be taken in Florida during the 1987-88 Migratory Game Bird Hunting Season because of the current low numbers of this species.